



IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

STICKNEY/TYLER ADMINISTRATIVE)	CASE NO. 3:98CV7538
PRP GROUP, et al.,)	
)	JUDGE JAMES G. CARR
Plaintiffs,)	
)	
v.)	
)	FOR SETTLEMENT PURPOSES ONLY
EARL SCHEIB OF OHIO, INC., et al.,)	
)	
Defendants.)	

THE DIAL CORPORATION'S MEDIATION POSITION PAPER

I. Corporate History.

Plaintiff, the Stickney-Tyler Administrative Group (STAG), brought this cost recovery action against The Dial Corporation as the corporate successor to both Sinclair Manufacturing and the Purex Corporation. Sinclair Manufacturing began in 1911 on Brown St. in Toledo manufacturing a line of household cleaning products. Sinclair moved its operations to Detroit Ave. in Toledo in 1962. Purex acquired Sinclair in 1978 and Dial acquired Purex in 1985. The Detroit Ave. plant ceased operations in 1988. Dial has assumed the liabilities of Sinclair and Purex for purposes of this litigation.

II. Plaintiff's Nexus Information.

STAG provided Dial with three sources of information regarding Dial's nexus to the Stickney and Tyler Landfills: (1) STAG's Civil Rule 26(a)(1) initial disclosures which included the names, and in some, but not all instances, the addresses of each individual and a short statement regarding that person's knowledge of discoverable information;¹ (2) access to STAG's database which contains file folders for each responsible party containing witness statements, excerpts from transcripts, affidavits, and summaries of interviews; and (3) the TLI Allocation Report which contains summaries of the nexus information for each responsible party. Since STAG's database contains the most comprehensive, first-hand information, Dial provides the following table of that information including excerpts of that information (a copy of the complete file on Sinclair is included as Attachment 1):

Name or Designation ²	Document Type	Excerpts
CW6T (driver for Community Sanitation Service according to the TLI Report)	Transcript	<ul style="list-style-type: none">• "Sinclair Manufacturing . . . corner of Detroit and Benore Road."• "Six three yard containers on one side and two or three, let's say three yards on the opposite side . . ."• " . . . three times a week."• "Empty plastic jugs, all of them. Every jug that had little holes and stuff in it, they tossed it right away."
EPA 1995-4 (not identified)	Transcript	<ul style="list-style-type: none">• "Dial Soap, Detroit Avenue, that was another account of Community Sanitation, BFI."• "They made bleach too I think."
EPA 1995-2 (driver for CSS according to TLI Report)	Transcript	<ul style="list-style-type: none">• "both rear loader and front loader."• "starting in the late fifties."• Started picking up with a front loader in '62.• "mostly plastic bottles."• "some of them had a little chlorine bleach."• Took waste "to Dura or Stickney landfill when it was a front loader."

¹ For example, in Exhibit 1 of STAG's Rule 26 Disclosures, STAG lists the name of "Chico" connected with Sinclair Manufacturing, but gives no other information.

² The names of certain individuals have not been supplied to defendants on the grounds of confidentiality agreements STAG has alleged to have entered into with the City of Toledo and/or U.S.EPA.

		<ul style="list-style-type: none"> • "It might have gone to Tyler if it was that rear loader." • "six three-yard containers. . . three times a week." • Believes he was the only driver servicing the Sinclair Manufacturing account. • Does not recall seeing anything else in their waste.
Nelson Osenbaugh	Unsigned and undated affidavit	<ul style="list-style-type: none"> • Worked for CSS as a waste hauler from 1961 to 1970. • "I hauled waste from Sinclair Manufacturing Co to the Dura Landfill. The waste was old plastic jugs that used to contain bleaches and soaps. The waste was hauled out of Sinclair Manufacturing in barrels. I hauled waste from Sinclair Manufacturing two to three times a week."
Paul Dauterman	Signed affidavit	<ul style="list-style-type: none"> • Worked for CSS as a waste hauler from 1956 to 1969. • "I hauled waste from Sinclair Manufacturing to the Dura Landfill. Most of the wastes were broken plastic jugs that used to contain soaps and bleaches."
Paul Dauterman	Summary of interview	<ul style="list-style-type: none"> • From 1960 to 1966, primarily used Dura Landfill. • Went to Stickney or Tyler if Dura was closed for some reason - possibly a few times per month. • Sinclair Manufacturing - plastic jugs that were empty.
George Zolciak (CIC03-1)	Signed affidavit	<ul style="list-style-type: none"> • retired Sinclair Manufacturing employee • worked at Sinclair from 1964-1965 and 1966-1972. • Material handler and maintenance man working in soap products and plastic bottle divisions. • Many of the plastic bottles were discarded in the waste dumpsters • "It is my understanding that some of the plastic contained PCBs." (Note; the 'C' in 'PCBs' is marked out with a 'V' and the initials of 'GZ' are next to it) • Periodically plastic mold machines would be purged and purgings were placed in waste dumpsters. • Machines leaked oil which would be cleaned up and placed into dumpsters. All other waste, floor sweepings, and contaminated plastic were also thrown into the dumpsters. • Waste was first picked up by Benton and then later CSS.
Eugene Janowski (CIC02-1)	Signed affidavit	<ul style="list-style-type: none"> • Retired Sinclair employee • Started working for Sinclair in 1960 and left in 1988. • Warehouseman, production line worker, shipping and chemical mixer. • Following chemicals were delivered to Sinclair: sulfonic acid, chlorine, hydrochloric acid, caustic

		<p>liquid.</p> <ul style="list-style-type: none"> • During production, there would be "bad runs" – plastic containers would be punctured in the bottom of the bottle and drained. Plastic bottles would be thrown into the waste dumpsters. Sometimes numerous pallets of products would be disposed. • Oil from hydraulics leaked from machines. Cleaned up with absorbent. Hydraulic waste would be cleaned up by shop vac and dumped into inside pit. Absorbent would be discarded into dumpsters. • Drums of used hydraulic oil would be hauled away.
Stanley Morawski	Summary of interview	<ul style="list-style-type: none"> • Worked for CSS from 1952 to 1972. • Promoted to supervisor after 6 years. • Picked up industrial waste and took it to both Tyler and Dura Landfills. • From 1960 to 1966, went to all area landfills including Stevins in Michigan, King Road, Consaul Street, Dura, Tyler and Stickney, plus others. • What determined which landfill they would go into would be which was the closest and which ones were open that day. • During that period, CSS used on a daily basis, Tyler, Stickney, and Dura. Industrial material was dumped at Dura and Tyler in equal amounts. • No personal knowledge of industrial waste being taken into Stickney. • Sinclair Manufacturing: rubbish, soap bottles, and plastic.
CW06-1 (driver for CSS)(appears to be Stanley Morawski based on similarity of responses)	Unsigned and undated statement	<ul style="list-style-type: none"> • Driver for CSS from 1952 until he retired. • Picked up industrial waste and took to Tyler and other landfills. • From 1960 to 1966, went into all area landfills including Stickney and Tyler. • During that period, CSS used Stickney and Tyler on a daily basis. • Industrial material was dumped at Tyler • No personal knowledge of industrial waste going to Stickney. • Sinclair Manufacturing: rubbish, soap bottles and plastic.

The TLI Report contains summaries of the same witnesses as set forth in the Table above with two exceptions: (1) the TLI Report identifies "Witness EPA M-3" who indicates that he picked up "empty jugs and some paper" from Sinclair between 1960 and 1968 on a daily

basis from a 30 yard box; and (2) the TLI Report does not identify Stanley Morawski whose interview summary appears in the STAG database under the Sinclair Manufacturing file.

III. Dial's Nexus Information.

Sinclair Manufacturing began its operations on Brown Street in Toledo in 1911. Sinclair moved its operations to the corner of Detroit and Benore Roads in Toledo in 1962. The Brown Street facility was approximately 8 miles from the King Road Landfill and approximately 6 miles from the Dura, Stickney and Tyler Landfills. These distances were calculated from a City Map of Toledo. The King Road Landfill was a municipal landfill operated by Lucas County between 1954 and 1976 (See Complaint at Attachment 2). On the other hand, Sinclair's Detroit Road facility is much closer to the Dura, Stickney and Tyler Landfills than it is to the King Road Landfill. Therefore, between 1950 and 1962, there is much higher probability that Sinclair's wastes went to King Road than to the Stickney or Tyler landfills. This is not accounted for in TLI's Report.

Lucas County has sued Dial as the successor to Sinclair and Purex for cost recovery under CERCLA for response costs incurred at the King Road Landfill (Attachment 2). Nexus information in that case consists of statements and interviews of various County and CSS employees who indicate that Sinclair's waste was delivered to the King Road Landfill. No waste volume allocation has been determined to date.

Dial has also been implicated in the Dura Landfill by way of a 104(e) information request from U.S. EPA and Dial's involvement in the PRP organizing group. Similar statements, affidavits and transcripts from CSS employees have been offered to show Dial's nexus to the Dura Landfill. Dial has not resolved its potential liability with respect to the Dura Landfill cleanup.

Dial has no operational records from either Purex or Sinclair operations.

IV. Interpretation of the Sinclair Nexus Data.

The TLI Allocation Report is the only document that has been supplied to the defendants in this action in support of Plaintiff's demand for settlement. Matt Lowe, the author of the TLI Report, was made available to the defendants at a meeting in April 1999 at which time counsel had the opportunity to question Mr. Lowe's Report and his underlying rationale and assumptions.

The TLI Report contains information and an allocation factor for each identified PRP. The information for Sinclair Manufacturing is contained on pages 136 – 138 of the Report including summaries of the information contained in the table above (Bates Stamp Nos. TLI000196 – 198). TLI's interpretation of this data together with Dial's noted discrepancies in the database are contained in the following table:

Category	TLI's Calculation	Evidentiary Basis	Discrepancy
Waste Volume	58.5 cubic yards per week (average of 81 cubic yards and 36 cubic yards)	<ul style="list-style-type: none">- one driver recalls picking up nine three yard containers three times per week (81 cubic yards)- one driver recalls picking up six three yard containers two times a week (36 cubic yards per week)	<ul style="list-style-type: none">- did not account for a third driver (Nelson Osenbaugh) who indicated that he picked up waste two to three times per week and hauled it to Dura Landfill from 1961 to 1970).- Adjusted total volumes for Sinclair do not comport with TLI's weekly calculation (see p. 9 of the EPM Report, Attachment 3).
Waste Category	Category 3 – Industrial Process or Residuals – Possible COCs	<ul style="list-style-type: none">- Plastic jugs containing chlorine bleach and floor sweepings.	<ul style="list-style-type: none">- One driver (CW6T) indicated "empty plastic jugs, all of them."- One driver (EPA 1995-2) indicated "mostly plastic bottles . . . some of them had a little chlorine bleach."- One driver (Nelson Osenbaugh) indicated "old plastic jugs that used to contain bleaches and soaps."- One driver (Paul Dauterman0

			<p>indicated "most of the wastes were broken plastic jugs that used to contain soaps and bleaches. . . plastic jugs that were empty."</p> <ul style="list-style-type: none"> - A Sinclair employee (George Zolciak) indicated that "machines leaked oil which would be cleaned up and placed in dumpsters." - A Sinclair employee (Eugene Janowski) indicated that "plastic bottles would be punctured in the bottom and drained" and bottles discarded. - One driver (Stanley Morawski) indicated that Sinclair's waste stream consisted of rubbish, soap bottles and plastic). - One driver (EPA M-3) indicates that he picked up "empty jugs and some paper" from Sinclair. - TLI assigned the same Category 3 to Sun Oil which deposited oily sludge from their refinery at Tyler. - TLI assigned the same Category 3 to Oxford Paints whose waste consisted of solvent residue. - TLI assigned Category 6 to Surface Combustion/Grimes Aerospace despite evidence that waste consisted of oil saturated sweepings and rubbish.
Waste Destination	Applied waste destination default factors	<ul style="list-style-type: none"> - Drivers indicated that front end loaded waste went to Dura or Stickney and with rear loader, it might have gone to Tyler. 	<ul style="list-style-type: none"> - One driver (Nelson Osenbaugh) indicated that he hauled waste from Sinclair to Dura Landfill from 1961 to 1970. - One driver (Paul Dauterman) indicated that he hauled waste from Sinclair to Dura Landfill from 1956 to 1969 and went to Stickney or Tyler a few times per month. - One driver (EPA 1995-2) indicated that starting in 1962 he hauled waste to Dura or

			<p>Stickney and that waste might have gone to Tyler if it was a rear loader.</p> <ul style="list-style-type: none"> - One driver (Stanley Morawski) indicated that from 1960 to 1966, he hauled waste to all area landfills and waste would go to whichever landfill was closest or which one was open.

From this information, Dial draws the following conclusions:

1. *Waste Volume.* TLI failed to take into account the possibility that Sinclair's waste may have been picked up twice a week instead of three times a week. TLI did not use the average value which it calculated in its allocation formula (See EPM Report, Attachment 3). TLI did not account for the fact that compacted empty plastic bottles are not equivalent to compacted generic industrial or municipal waste. TLI overestimated Sinclair's waste volume (Attachment 3).
2. *Waste Category.* Despite the totality of evidence which indicates that Sinclair's waste consisted of empty plastic bottles possibly containing *de minimis* quantities of soap or bleach, and possibly hydraulic oil absorbent from floor sweepings, TLI categorized Sinclair's waste the same as other generators whose wastes consisted of oily process waste and solvent residue. Sinclair's waste category designation should be reduced to Category 6.
3. *Waste Destination.* TLI assumed that Sinclair's wastes went to City landfills from 1950 until 1968. By applying the waste destination default factors found on page 9 of the TLI Report, TLI overestimated the amount of waste sent to Tyler and Sinclair Landfills. The evidence suggests that the majority of Sinclair's wastes may have been hauled to Dura

Landfill from as early as 1956 to as late as 1969. Only one driver recalled hauling Sinclair's wastes to Stickney or Tyler, but only a few times a month and the remaining time the waste was hauled to Dura Landfill. Dial has been implicated as a generator/responsible party for both Dura and King Road Landfills. King Road Landfill was only a short distance further than Stickney and Tyler landfills from Sinclair's former Brown Ave. facility.

Because of the inherent uncertainty and unreliability of the evidentiary database, Dial had concerns about the use of such data in an allocation scheme which does not adequately account for these uncertainties. Dial, therefore, retained Tim Havranek of Environmental Project Management, Inc. to perform a probabilistic systems modeling report on the evidence used by TLI to establish an allocated percentage for Dial (EPM Report, Attachment 3). Unlike the TLI Report, the EPM Report attempts to quantify, using probabilistic modeling, the uncertainty in the data upon which TLI based its allocation. The EPM Report concludes that the allocation assigned to Sinclair greatly overestimates the most likely waste volume that could have been delivered to the Sinclair or Tyler Landfills. It is important to note that EPM used the same assumptions that TLI used in its calculations and did not account for the discrepancies noted in this Mediation Position Paper.

V. Issues Regarding Recoverable Costs.

(a). *Response Costs related to XXKem Site.* In its February 21, 2000 correspondence to John Edgcomb (Attachment 4), Mr. Edgcomb noted STAG's response to Safety-Kleen's First Set of Interrogatories wherein STAG stated: "Certain costs expended at Stickney are attributable to XXKem and are included in the Stickney costs . . ." Counsel for STAG also states that "dividing costs on an acreage basis may be a useful way to begin to segregate

these costs.” On page 2 of that correspondence, STAG’s counsel further identifies past costs specifically related to XXKem, which does not include a line item for construction of the cover system. STAG notes, however, on page 1 that the cover system for the XXKem Site comprises approximately 7.47% of the total area on which the cover system was constructed. Because there is no nexus information or evidence linking Sinclair to the XXKem Site, response costs reasonably related to the XXKem Site, including a percentage of the cover system, should be subtracted from the response costs related to the Stickney and Tyler Landfills.

STAG has indicated in its correspondence to Andy Perellis dated February 21, 2000 (Attachment 5) that “[a]ctual divisibility of the costs between those attributable to Stickney and those attributable to XXKem is largely impossible until the issue of recoverability under [CERCLA] Section 107 is decided.” First, the physical divisibility of costs can be done on some reasonable basis, for example, on a percentage of total acreage. Second, even assuming STAG can bring a Section 107 claim for response costs related to XXKem, STAG cannot bring that claim against parties, like Sinclair, who have no nexus to the XXKem Site.

(b). *TLI Allocable Percentage for Various Parties.* As part of the exchange of pre-mediation cost related information, STAG was asked to identify the amount of settlement and TLI allocable percentage from each of the “settling parties,” “participating parties,” and “settling defendants.” STAG was also asked to identify the amount of response costs (past and future) and the TLI allocable percentage for each of the “Director parties.” STAG did provide information on the amount of response costs attributable to the Director parties, but did not provide the other requested information. This information is critical to defendant’s analysis of the correlation between settlement amounts and TLI assigned

percentages as a means of evaluating the fairness of STAG's settlement demands against the remaining defendants. As the Sixth Circuit in *Centerior Service Co. et al. v. Acme Scrap Iron & Metal Corp.*, 153 F.3d 344, 348 (1998), indicated, in actions seeking contribution, the burden is on the plaintiff to establish the defendant's equitable share of response costs.

(c). *Attorneys' Fees*. STAG is claiming over \$1,000,000 in attorneys' fees, arguing that these fees are fully recoverable because they are not related to bringing the underlying cost recovery action, but are related to the actual costs of cleanup. STAG provided a general response to defendants' request regarding this issue by citing a list of "Implementation Costs" charged by STAG's counsel, including "negotiation and resolution of regulatory issues," "negotiation with the agency regarding the XXKem source," "reporting to the agency," etc. (see Page 4 of Response to Andrew Perellis, dated February 21, 2000, Attachment 5). STAG, however, did not attempt to reconcile its position with respect to these fees with the holding in the Sixth Circuit's decision in *Donahey et al. v. Bogle et al.*, 129 F.3d 838, 843 (1997) wherein the Court stated:

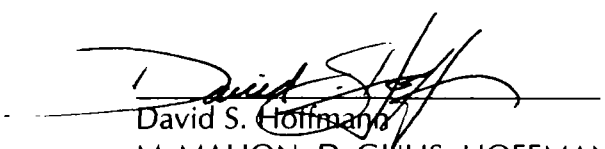
"In our view, *Key Tronic* contemplates a narrow exception to the general rule prohibiting the recovery of attorney's fees. That exception is limited to steps taken to finger previously unidentified parties that might bear some legal responsibility under the terms of CERCLA for pollution of the site."

Under the Sixth Circuit's construction of the rule of law in *Keytronic*, it appears as though most, if not all, of Plaintiff's attorney's fees are not recoverable.

(d). *Duplicative Consultant Costs*. In the February 9, 2000 correspondence from Andy Perellis to STAG (Attachment 6), Mr. Perellis noted a number of charges by consultants that appeared to excessive and/or a duplication of effort by several consultants. STAG was asked to provide an explanation and detailed invoicing. In STAG's February 21, 2000

response, STAG provided a narrative explanation of what each consultant was tasked to perform, but did not provide, in Sinclair's view, an adequate explanation of these charges. For example, STAG indicates that Orion Management International, Inc. was retained to "review records and interview witnesses to identify PRPs for the sites." Dykema Gossett was retained by STAG to "oversee the work of Orion Management." TLI Information Systems, Inc. was retained by STAG to perform a "third-party independent analysis of the evidence to identify all parties linked to the sites." Based on this information, these efforts appear to be duplicative and excessive and STAG's response costs should be accordingly reduced.

Respectfully submitted



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CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing, The Dial Corporation's Mediation Position Paper, was sent by overnight mail on this 31 day of March 2000 to the following recipients:

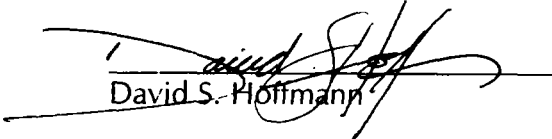
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ATTACHMENT 1

376-026321

T 1- 014477

Sinclair Manufacturing Co.

Mapping Swan Creek Cleanup



SWAN CREEK'S CLEANUP PROBLEMS EYED BY SURVEY GROUP
Mr. Sheldon confers with resources experts, from left, William Ufer, of Delaware, and Charles Hahn and John Garrett, of Columbus

Nepper Offers To Sell City Site For Incinerator

Board Chairman Says County Property Off Gage Road Would Cost \$35,000

Another site for the city's multimillion-dollar incinerator was offered today by Guy Nepper, chairman of the Board of County Commissioners.

"I'm not proposing anything to City Council," Mr. Nepper said. "I'm merely offering to sell the city this property which the county no longer needs."

The site he offers comprises 57.17 acres off Gage Road near the Michigan Avenue, east of Jackson Road and proposed 9.1 million incinerator, but in doing so he has avoided about a half mile west of Levee Road. Mr. Nepper said the city probably could have the site for \$25,000 to \$40,000, but that site for industrial purposes. The property has been used and obtain an incinerator site for sanitary land fill by the city since it was acquired in 1961. The city plan commission has the 1961's, Mr. Nepper said. "If it is approved, construction city could use to bury ash and of the incinerator is not expected debris from its incinerator, and to start next year."

Mallers Plan 1st Meeting In City Since '52

53 Delegates Expected At Union Convention

The International Mailers' Union will hold its annual convention at the Commodore Perry Hotel, Saturday through next Wednesday.

About 50 delegates are expected to attend the convention, to be held here for the first time since 1952. Toledo Mailers' Union, Local 24, will be host.

Business sessions will begin Monday, with workshops by Herman LaPorte, president of the Toledo local, and Mayor Foster. Lawrence N. Steinberg, president of Teamsters Joint Council 14, and Harold A. Hester, of Denver, Mailers' international union president, will be principal speakers.

James P. Poir, a representative of 66 New, Inc., and severe Gross, director of the labor-management relations committee, will start sessions Sunday morning. In the afternoon, Robert H. Moore, of Washington, D. C., deputy director of the U.S. Mediation and Conciliation Service, and Mel Stiers, of Chicago, executive director, United Retail Workers' Union, will speak.

The convention dinner will be held Tuesday night in the hotel. Officers and guests will hold a luncheon Sunday at the workhouse, located near Whitehouse.

The international has a total of 4,100 members in 77 local unions.

An Illinois man, 45, and his wife, 34, were held for questioning this morning, immediately after a man attempted to steal off from the back of the man. The man, 45, was arrested by the ASP Sure at 502 1st St.

An A&P employee, Rene Lopez, 23, of 23 Marcy St., recovered the money at the store. The man, 45, was arrested by the ASP Sure at 502 1st St.

Held In Alleged Store Theft Attempt

An Illinois man, 45, and his wife, 34, were held for questioning this morning, immediately after a man attempted to steal off from the back of the man. The man, 45, was arrested by the ASP Sure at 502 1st St.

An A&P employee, Rene Lopez, 23, of 23 Marcy St., recovered the money at the store. The man, 45, was arrested by the ASP Sure at 502 1st St.

Government Aids Inspect Four Swan Creek Areas

Survey Is First Step To State Approval Of Request For U.S. Funds For Cleanup

Four Swan Creek areas in Toledo were inspected this morning by a survey party of 14 state, local, and area officials studying pollution, flooding, and erosion problems involved in improving the stream.

The field survey is required before state action can be taken on a request for federal funds to help finance the cleanup of Swan Creek.

The inspection party traveled by bus along the creek in western Lucas County. A public hearing in the Maumee City Hall was scheduled to be held late today.

Stream Blocked

The morning group visited the creek areas at South Erie Street, Western Avenue and Chester Street, Glendale Avenue, and a place on South Avenue near Bethel Lutheran Church where debris has blocked the stream.

Included in the survey group are representatives of the Ohio department of natural resources, Ohio department of health, and Ohio State University.

The Swan Creek project was selected as the initial project of Clear Water, Inc., a coordinating agency for efforts to clean up the Maumee River basin.

The application for federal funds was made July 15 and must be approved by the state water commission before being forwarded to Washington. Today's survey is the first step toward state approval.

Federal funds are available for a share of the planning and construction costs required for

Rescue Squad Delivers Baby By The Book

A three-man Sylva Township rescue team doubled its obstacles today—and the baby is delivered for Mrs. Leahy Meadows as doing fine.

The squad, headed by Capt. Bert Hansen, was called to the Meadows home, 802 West Central Ave., at 7:15 a.m. An ambulance was summoned.

But the story was in a hurry. As the ambulance crew and Mr. Meadows stood by, Captain Hansen, Deputy Chief Leo Wittbeck, and Donald Gredel delivered a 7-pound, 13-inch son, Mrs. Meadows' first born.

"It wasn't just like the book said it would," Captain Wittbeck said.

Mrs. Meadows and the baby were taken to Toledo Hospital. "Everything's fine," a physician said. "The mom did a good job."

Half Way Creek's Color Traced To Detergent Maker

Pollution Officials Cite Sinclair; Company Blames Error By Employee

Sinclair, Manufacturing Co., department's environmental division, has been ordered to conduct a collateral check and to determine what action may be required.

A state permit for a package treatment plant at Sinclair was issued Jan. 7, 1963. George Morrey, assistant supervisor, environmental health, said today.

"We are now seeking to determine whether such a plant would treat such a substance as acrylic latex," Mr. Morrey said.

The pipe from which the liquid bubbled into the ditch is some 200 yards from Sinclair's plant.

Left Plant Untreated
Later, Marab Sinclair, firm chemist said the substance was emptied into a sanitary line leading to the plant's own package treatment plant. But because of the nature of the chemical, it apparently left the plant untreated, and was dumped into a ditch. From there, it flowed into Half Way Creek, he theorized.

The Division of Air and Water Pollution Control began an investigation Aug. 8 after members of Midway Archery Club, Gessner Road and Little High, way reported that creek waters looked like skinned milk.

P. M. Warneford, acting division commissioner, said the office had no record of a package treatment plant at Sinclair. He called in the city health

Archers Aim At Clearing Dirtied Creek

*Half Way's Water
Milky White; Source
Of Pollution Sought*

The nature and source of contaminants that turn waters of Half Way Creek milky white is under investigation.

This occurs at regular intervals in the vicinity of Benore Road and Dixie Highway, according to members of the Mudjaw Archery Club.

Half Way Creek flows through the archery club's property as it curls its way to Lake Erie near Point Place. Recurrent pollution has killed fish by the hundreds, members say.

It happened again Saturday. Angelo Kambas, archery club official, said discoloration of the spring-fed creek started shortly after 12:30 p.m.

Wash-Water Look

By 6 p.m., the creek, 15 yards wide at the club, had taken on the look of dirty wash water.

The substance boils into a ditch from a pipe, Mr. Kambas said. The ditch leads into the creek.

James Turner, inspector for the city's division of air and water pollution control, has been assigned to investigate.

He said he checked the drainpipe yesterday and detected a whitish fluid dribbling from it. The pipe is about a half mile upstream from the archery club.

Samples Needed

"We'll have to get some of the water when it's running with these pollutants for chemical analysis and go on from there," he said.

He said he would test a container of creek water scooped up Saturday by Mr. Kambas. He doubted, because of the lapse in time, that the test would be conclusive because of change in the chemicals' structure.

Brows Were Arched, Too



WHITE FILM COVERS SURFACE OF STREAM

Mr. Kambas pulls tree limb from Half Way Creek

99-01-8

8-10-66

—Slide Photo

Page 273

- [1] A. Yes, I was in there. I remember taking
 [2] rubbish out of there, but at the time I picked it,
 [3] it was with a front loader. And I can't recall
 [4] just stuff that we got out of there. This was
 [5] such a big plant and yet I don't remember it that
 [6] well.
 [7] Q. Do you recall ever taking waste from that
 [8] plant to Tyler landfill?
 [9] A. I don't recall it, no. That's why?
 [10] said.
 [11] Q. You had talked about company called
 [12] Plabell?
 [13] A. Plabell Rubber.
 [14] Q. And the possibility that waste from that
 [15] plant might have gone to Stickney.
 [16] A. Plabell Rubber was a, not a big stop,
 [17] everything that we got out of there was rubber.
 [18] Had to back a back loader in there, into the hole,
 [19] and unload back-loader containers, maybe I would
 [20] say three times a week. It was out on South Saint
 [21] Clair Street, Plabell Rubber, just out of downtown
 [22] on the south end of Saint Clair.
 [23] Q. When did you first start picking up from
 [24] Plabell?
 [25] A. When we had the back, started getting the

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- [1] back loaders in, I would say in '57, '58,
 [2] something like that.
 [3] Q. Okay. And where do you think that waste
 [4] went?
 [5] A. Well, I would say that waste could have
 [6] went to Tyler and [REDACTED] either one. Tyler, they
 [7] could have went into Tyler too. That's quite a
 [8] long time, we had that contract for a long time.
 [9] Q. In your statement you talked about a
 [10] company called Andersons Fertilizer.
 [11] A. Andersons Fertilizer, I'm trying to.
 [12] Q. You indicated in your, it's indicated in
 [13] your summary that you picked up fertilizer that
 [14] was cleaned from factory machines and conveyor
 [15] belts?
 [16] A. In Rossford, Ohio. I'm trying to, is
 [17] that the, is that the street that's on that one?
 [18] Q. This is no street indicated.
 [19] A. Well let's see, Andersons is over there
 [20] is way, see, what I'm saying this is why got to be
 [21] a big, it was a big stop because Andersons in
 [22] Maumee is awful big. And we had roll-off boxes in
 [23] there and the contract was with when we got
 [24] roll-off boxes in and they called quite often, so
 [25] I'm not too familiar. I know it was all of this

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- [1] wet fertilizer and sweepings from underneath the
 [2] chutes and things like that. We had open
 [3] thirty-yard boxes in that place.
 [4] Q. Did you ever service them before you had
 [5] the roll-off?
 [6] A. I don't recall of ever servicing them,
 [7] from my part of it, but it might have been because
 [8] they were, I think we got the contract, we got it
 [9] with the roll-off.
 [10] Q. You don't have any recollection of where
 [11] this waste material was taken?
 [12] A. Well it had, where it was taken, it had
 [13] to be in the landfill either, it had to be [REDACTED]
 [14] yeah.
 [15] Q. Would it have ever gone to Stickney; do
 [16] you think?
 [17] A. I don't think so. I don't think we had
 [18] the contract at the time when Stickney was going.
 [19] Q. Well Stickney was still open when you
 [20] first got it?
 [21] A. Yeah, sure, Stickney and Tyler, but [REDACTED]
 [22] was not open until after Tyler was closed.
 [23] Q. Right. But both Stickney and Tyler and
 [24] [REDACTED] were open at the same time?
 [25] A. Yes.

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- [1] Q. In 1963 when you got roll-offs?
 [2] A. Right. But we, the only thing I can tell
 [3] about the Andersons is that it had to be when we
 [4] had the roll-off box and that had to be after '63.
 [5] I think you're saying that we got the roll-offs
 [6] in, and we got the contract to put so many
 [7] thirty-yard boxes and how many and that I don't
 [8] know.
 [9] Q. Okay. Do you recall which driver picked
 [10] up with Andersons?
 [11] A. Well we had.
 [12] Q. Lots of drivers?
 [13] A. Yes, because they were on-call. It could
 [14] have been three or four roll-off drivers could
 [15] have got that.
 [16] Q. What about InterChemical?
 [17] A. InterChemical.
 [18] Q. Is that something that you recall?
 [19] A. I don't know an InterChemical.
 [20] Q. You referred to that as a plastic
 [21] manufacturing company in your statement.
 [22] A. Oh, I'm talking now Sinclair
 [23] Manufacturing, you wouldn't be talking about would
 [24] you?
 [25] Q. I'm just referring to InterChemical.

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- [1] Company?
- [2] A. DeVilbiss, yeah, we picked up waste at
- [3] DeVilbiss Company. I'm trying to think of what
- [4] we, I think we had front-loader containers in
- [5] there, right down Detroit Avenue.
- [6] Q. Phillips Avenue.
- [7] A. Phillips and Detroit, it's just, it ain't
- [8] on Phillips. DeVilbiss is right on Detroit.
- [9] Q. And do you recall when you first started
- [10] servicing that company?
- [11] A. After we got the front loaders.
- [12] Q. Did you do that yourself?
- [13] A. I picked it up, yes.
- [14] Q. Do you remember how many containers they
- [15] had?
- [16] A. I don't recall how many containers or how
- [17] often we picked it. It wasn't, it was all just
- [18] dry plain rubbish that we handled and we handled
- [19] that off of a dock. And I know there was a, maybe
- [20] three or four containers in there about three
- [21] times a week. We didn't get much out of that
- [22] DeVilbiss plants.
- [23] Q. Did you ever see any DeVilbiss trucks at
- [24] any of the landfills while you were at the
- [25] landfills?

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- [1] A. Yes, yes.
- [2] Q. What do you recall seeing?
- [3] A. This, what they had on them or what they
- [4] dumped, I don't know.
- [5] Q. Do you recall Sinclair Manufacturing?
- [6] A. Yeah. Sinclair Manufacturing, that's the
- [7] one that had the plastic jugs and everything,
- [8] they're the corner of Detroit and Benore Road.
- [9] Q. What did you, do you recall when you
- [10] first started?
- [11] A. After we got the front loaders in.
- [12] Q. Did you do that yourself?
- [13] A. I done that stop, yes.
- [14] Q. And do you remember how many containers
- [15] they had there?
- [16] A. Six ~~containers~~ on one side and two or
- [17] three, let's say ~~three~~ three yards on the opposite
- [18] side, that's two sides of the building.
- [19] Q. How often would you stop there?
- [20] A. Every, I think it was Monday, Wednesday
- [21] and Friday, three times a week.
- [22] Q. And do you recall what was in their
- [23] waste?
- [24] A. Empty plastic jugs, all of them. Every
- [25] jug that had a little holes and stuff in it, they

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- [1] tossed it right away.
- [2] Q. Do you recall Ohio Bell?
- [3] A. Ohio Bell. Yeah, I could remember Ohio
- [4] Bell but I know when we picked it. When it was
- [5] first started to pick, we picked it up with a back
- [6] loader and we had picked up with the front loader
- [7] too.
- [8] Q. Where was Ohio Bell located?
- [9] A. They were all over. They had
- [10] substations, just like Edison has got.
- [11] Q. What kind of pickups, what kind of
- [12] containers did they have when you first started?
- [13] A. Well, when we first started with
- [14] back-loader containers. That was a two-yard
- [15] container.
- [16] Q. And how many different stations do you
- [17] think they had?
- [18] A. Probably about four or five. I'm not
- [19] sure.
- [20] Q. Each of them had one two-yard container?
- [21] A. Yes, I'd say so, yes.
- [22] Q. How often would you pick up?
- [23] A. Once a week. It wasn't that big, it's a
- [24] substation.
- [25] Q. Where would you take this material?

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- [1] A. Taken to Tyler and [REDACTED]
- [2] Q. And do you remember what kind of material
- [3] was in the waste?
- [4] A. Just paper and the cardboard boxes and
- [5] rolls that they had the copper on and things like
- [6] that.
- [7] Q. Did you ever see any copper wire?
- [8] A. Never seen the copper wire, no.
- [9] Q. In your summary it indicates that they
- [10] had a lot of copper wire in their waste stream.
- [11] You don't recall seeing that as you sit here
- [12] today?
- [13] A. Well, I didn't see it. I'm going to go
- [14] back to what the drivers told me, this is what I
- [15] told you. When they were picking it up, any
- [16] copper that they would seen, they would confiscate
- [17] it, and that was like sixty cents a pound, that's
- [18] what they saved. That's what I'm going to. Of
- [19] course, it didn't bother me any whether they
- [20] picked it or not.
- [21] Q. Sharon Manufacturing, do you recall that
- [22] in Lambertville, Michigan?
- [23] A. Oh, yes. Yeah, we had a lot of trouble
- [24] with Sharon Manufacturing in Lambertville,
- [25] Michigan.

2 A. waste disposal for Royster?
3 No, I'm not. I assume, they were so close
4 to it, they may have done it themselves, but
5 I can't verify that.
6 Q. You never saw them dump in the Tyler dump?
7 A. No, I didn't.
8 Q. Are you familiar with an entity called
9 Rudolph-Libbe, Inc.?
10 A. General contractors.
11 Q. Would they have had any waste other than
12 construction waste?
13 A. No.
14 Q. Do you know who handled their waste?
15 A. The bulk of their waste was always handled
16 by BFI.
17 Q. Or Community Sanitation?
18 A. Or Community Sanitation, correct.
19 Q. Did you ever see any trucks from
20 Rudolph-Libbe in the Stickney, Tyler or
21 Dura landfills?
22 A. Not that I can remember, no.
23 Q. Why don't we, you let me know if you've
24 seen any trucks from these entities at
Stickney, Tyler or Dura.

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1 A. Sure.
2 Q. And if they're hauled by other than
3 Community Sanitation Service let me know
4 that too.
5 A. Correct.
6 Q. St. Charles Hospital?
7 A. St. Charles Hospital, okay, that was
8 Community Sanitation.
9 Q. St. Luke Hospital?
10 A. They were downtown on Robinwood. I don't
11 know who had them when they were downtown
12 here in Toledo.
13 Q. St. Vincent Medical Center on Cherry
14 Street?
15 A. I mean back then Community Sanitation had
16 all the hospitals.
17 Q. Sears Roebuck, I assume they would have had
18 an automobile servicing facility here?
19 A. Again, that was BFI, Community Sanitation
20 at all the Sears stores.
21 Q. And you never saw any Sears stores at
22 Stickney, Tyler or Dura?
23 A. No. I saw one of their tire trucks in
24 there once dumping scrap tires off.

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1 Q. And that was at Dura?
2 A. Yeah.
3 Q. Sharon Manufacturing?
4 A. That's up in Michigan. I don't know who
5 handled that account or I never saw any of
6 their trucks in the landfill.
7 When I say up in Michigan, we're so
8 close to the Michigan line here that you
9 could throw a stone over it.
10 Q. I went to law school in Ann Arbor.
11 A. Oh, well, then you know.
12 Q. Do you know if they would have dumped at
13 the Stevens landfill in Michigan?
14 A. Could very well have.
15 Q. You didn't know anything about the Sherwin
16 Williams Company?
17 A. No.
18 Q. On 1255 Osage is the --
19 A. On what street is it?
20 Q. 1255 Osage in Maumee.
21 A. Boy, where would that -- I lived in Maumee
22 for twenty-one years. I can't recall the
23 thing.
24 Q. Sinclair Manufacturing Associates?

1 A. Dial Soap, Detroit Avenue, that was another
2 account of Community Sanitation, BFI.
3 They're not here anymore. They moved.
4 Q. Did you see their trucks?
5 A. They made bleach too I think.
6 No, I don't recall seeing their
7 trucks. Of course, they could be using
8 unmarked trucks. I don't know, you know.
9 Q. Oh, I know, it's getting late in the day.
10 Smith Provision?
11 A. Smith Provision? Yeah, they were a meat
12 processor on Matzinger Road right next to
13 City Auto Stamping, across from AP Parts.
14 Did I see their trucks in the
15 landfill? No.
16 Q. I'm not sure I really care if they were a
17 meat processor.
18 Sun Oil, Sun Refining & Marketing, is
19 that the same as Sun Oil?
20 A. Sun Oil, same thing.
21 Q. Surface Combustion, Inc.?
22 A. Yes.
23 Q. What do you know about them?
24 A. They made furnaces, incinerators and stuff.

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1 Q. Who handled their waste?
2 A. BFI or Community Sanitation. I think I had
3 it for a short period of time.
4 Q. When did you have it?
5 A. Late '69, '70.
6 Q. What did their waste consist of?
7 A. Again, it was fabrication dunnage, welding
8 boxes, just general in-plant trash.
9 Q. Did they have any metal shavings?
10 A. No.
11 Q. They didn't have any slag?
12 A. If they did they had a scrap, you know, big
13 scrap boxes there that they handled all
14 their scrap in. I mean we basically had a
15 compactor there and just hauled their
16 in-plant trash.
17 Q. Who would have handled their scrap?
18 A. Either, probably at that time it was Harry
19 Linver & Company, which later became
20 Omnissource.
21 Q. That's a new one, okay.
22 Tecumseh Products?
23 A. Which would be the same as Acklin Stamping.
24 Q. Okay, that's right.

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1 A. B y, she's trying to catch me on these
2 tick questions here. I know that --
3 Q. Okay, we've done Teledyne and Textileather?
4 A. Yes.
5 Q. Tillotston Carburetor?
6 A. That was, later became Bendix. That was
7 Bendix, the Bendix that we were talking
8 about way back when. That Bendix and
9 Tillotston is one in the same.
10 They also bought Toledo Stamping too
11 and then later became Signal, but
12 Tillotston moved out of town way back in
13 the '60's. They just ceased --
14 Q. How ay back?
15 A. '65, '66, and Community Sanitation --
16 Q. Well, this landfill started to operate I
17 think in the mid '50's.
18 Yeah, I say at that time I believe
19 Community Sanitation serviced that account.
20 Did they have any of their own trucks?
21 None that I'm aware. They may have had
22 them, but none that I ever saw in the
23 landfill.
24 Q. Toledo Stamping, are you familiar with any

1 other hospitals?
 2 A. Yes, ma'am.
 3 Q. Do you have any idea what caused that
 4 smell?
 5 A. No. No, because there they had an
 6 incinerator then.
 7 Q. They did have an incinerator?
 8 A. Yeah, because this was a brand new hospital
 9 and they had an incinerator.
 10 Q. So would the waste that you would dump
 11 primarily be ashes?
 12 A. No. No, it primarily would be -- oh, gosh.
 13 Depends, things like that. Diapers for old
 14 people and people in surgery and all that
 15 good stuff.
 16 Q. Did they use those type of diapers in 1962?
 17 A. Pardon?
 18 Q. Did they use those type of diapers in 1962,
 19 the Depends type of diapers?
 20 A. Approximately the same thing.
 21 Q. It wasn't cloth then?
 22 A. No, I don't believe so.
 23 Q. Oh, okay. I'm just surprised.
 24 Q. They were paper, disposable.

1 Q. They were paper, disposable paper?
 2 A. Yeah.
 3 Q. Did you ever notice any chemicals in the
 4 St. Luke's waste?
 5 A. No, ma'am.
 6 Q. Did you ever notice any containers for
 7 cleaning fluid in their waste?
 8 A. No.
 9 Q. Did you ever -- oh, excuse me, where did
 10 the St. Luke's waste go to?
 11 A. Dura Avenue or Stickney.
 12 Q. But not to Tyler?
 13 A. No.
 14 Q. Did you ever pick up anything from St.
 15 Vincent's Medical Center?
 16 A. No.
 17 Q. Did you ever pick up from Sears Roebuck and
 18 Company?
 19 A. Yeah, I picked up with a front loader for
 20 Community.
 21 Q. What was in the Sears waste?
 22 A. Same old thing.
 23 Q. What same old thing would that be?
 24 A. Paper, wood, dirt off the driveway.

1 Q. Did you ever pick up any used oil from
 2 their automobile facilities?
 3 A. No, ma'am.
 4 Q. Did you ever pick up anything from their
 5 automotive facilities to the best of your
 6 knowledge?
 7 A. Well, they had a container sitting outside
 8 the building that I dumped.
 9 Q. And this would be a container that would be
 10 used by --
 11 A. The garage.
 12 Q. The garage?
 13 A. Or the maintenance, groundskeepers,
 14 whatever.
 15 Q. Didn't they have like a Sears Automotive
 16 Center where they would work on cars for
 17 people?
 18 A. Yes, ma'am.
 19 Q. So did you pick up the waste from that
 20 Automotive Center?
 21 A. Whatever was in the container, yeah.
 22 Q. Oh. Well, what would be in the -- would
 23 there be empty oil cans?
 24 A. Yeah, I suppose there were.

1 Q. But you never saw -- you never noticed any
 2 used oil?
 3 A. No.
 4 Q. Like if they would change the oil in a car?
 5 A. No, I never saw that.
 6 Q. Where did you take the Sears Roebuck waste?
 7 A. To Dura or Stickney.
 8 Q. Also Stickney? Would it be helpful to take
 9 a five-minute break?
 10 A. No, I should have went back out early. It
 11 only takes 15 minutes over there, that's
 12 all it takes.
 13 (A short recess was taken.)
 14 Q. [REDACTED], did you ever pick up from
 15 Sharon Manufacturing?
 16 A. I don't believe so. No.
 17 Q. Sherwin Williams Company or it was also
 18 known as Maumee Chemical Company?
 19 A. No.
 20 Q. Sinclair Manufacturing?
 21 A. Yes, ma'am.
 22 Q. For what company did you pick up from
 23 Sinclair?
 24 A. Community, both rear loader and front

1 loader.
 2 Q. That would have been starting in the late
 3 Fifties?
 4 A. Right.
 5 Q. And when did you start picking them up with
 6 a front loader?
 7 A. Approximately '62.
 8 Q. What kind of waste did Sinclair
 9 Manufacturing have?
 10 A. Mostly plastic bottles.
 11 Q. Did the plastic bottles have anything in
 12 them?
 13 A. Some of them had a little chlorine bleach.
 14 Q. Anything else?
 15 A. Not that I know of.
 16 Q. Where did you take the waste from Sinclair?
 17 A. To Dura or Stickney landfill when it was
 18 front loader.
 19 Q. Did you ever take --
 20 A. It might have went to Tyler if it was that
 21 rear loader.
 22 Q. How big was the container at Sinclair?
 23 A. They had six three-yard containers.
 24 Q. And how often did you pick them up?

1 A. Three times a week.
 2 Q. And to the best of your knowledge were you
 3 the only driver for Community servicing
 4 the Sharon Manufacturing -- excuse me,
 5 Sinclair Manufacturing account?
 6 A. As far as I know, yes.
 7 Q. Do you remember seeing anything else in
 8 their waste?
 9 A. No.
 10 Q. Did you ever pick up from Smith Provision?
 11 A. No.
 12 Q. Let me go back to Sinclair for a minute.
 13 Did you ever pick up drummed or liquid
 14 waste from Sinclair?
 15 A. No, ma'am.
 16 Q. Do you have any -- do you know whether
 17 Community Sanitation Services picked up
 18 drummed or liquid waste?
 19 A. No, I do not.
 20 Q. Did you ever pick up from Smith Provision?
 21 A. No.
 22 Q. Did you ever pick up from Sun Refining and
 23 Marketing, or Sun Oil?
 24 A. For Mr. Benton.

Sinclair Mfg.

AFFIDAVIT

STATE OF OHIO
COUNTY OF MAUMEE

)
) ss.
)

I, **NELSON OSENBAGH**, being of full age and first duly sworn on oath, depose and state the following:

1. I worked for **Community Sanitation Services, Inc. (CSSI)** as a waste hauler from **1961 to 1970**. I began hauling on residential routes and then moved to commercial routes. I drove an open truck, a front-end loader, a rear-end loader and a commercial roll-off for CSSI.

2. I hauled waste from **A.P. Parts Manufacturing Co.** to the Dura Landfill. The waste was general rubbish.

3. I hauled waste from **City Auto Stamping** to the Dura Landfill. The waste was in roll-off boxes.

4. I hauled waste from **Bunting Brass** to the Dura Landfill. The waste was general rubbish.

5. I hauled waste from **Dana Corporation** to the Dura Landfill.

6. I hauled waste from **Flower Memorial Hospital** to the Dura Landfill. The waste was the normal type of waste picked up at a hospital.

7. I hauled waste from **Gulf Oil Refinery** to the Dura Landfill.

8. **Don Crossman** hauled waste from the **Plabell Rubber Co.** to the Dura Landfill. The waste was placed in one-yard containers. The waste was rubber scraps that had a rotten odor.

9. I hauled waste from **Mercy Hospital** to the Dura Landfill. The waste was the general type of waste found at a hospital.

10. I hauled waste from **National Laboratories, Inc.** to the Dura Landfill. I picked up waste at National Labs two or three times a week. Most of the waste was general rubbish. I also would haul a truckload of old containers used for highly concentrated cleaners out of National Labs about once a month.

11. I hauled waste from **Sinclair Manufacturing Co.** to the Dura Landfill. The waste was ~~old plastic jugs~~ that used to contain bleaches and soaps. The waste was hauled out of Sinclair Manufacturing ~~in barrels~~. I hauled waste from Sinclair Manufacturing two to three times a week.

QUE000220

12. I hauled waste from Ohio Bell Telephone to the Dura Landfill. The waste was general rubbish.
13. I hauled waste from General Telephone to the Dura Landfill. The waste was old aluminum and steel wire.
14. I hauled waste from Reichert Stamping Co. to the Dura Landfill. The waste was general rubbish containing a certain amount of scrap metal.
15. I hauled waste from Riverside Hospital to the Dura Landfill. The waste was the general type of waste found at a hospital. Some of the wastes were ashes in one-yard containers.
16. I hauled waste from St. Charles Hospital to the Dura Landfill. The waste was a general type of waste found at a hospital.
17. I hauled waste from Acklin Stamping to the Dura Landfill.
18. I hauled waste from Teledyne to the Dura Landfill. I hauled waste from Teledyne five times a week. The wastes were magnesium shavings in one-yard containers.
19. I hauled waste from Toledo Hospital to the Dura Landfill. Some of the wastes were ashes. Most of the waste was the general type of waste found at a hospital.
20. I hauled waste from Haughton Elevator to the Dura Landfill.
21. I hauled waste from the University of Toledo to the Dura Landfill. The wastes from the University were fire loads. Fire loads had to be dumped before they would catch the truck on fire.

I hereby swear that the contents of this Affidavit are true and correct and are based on my own personal knowledge.

Further affiant says not.

Nelson Osenbagh

Subscribed and sworn to before me this _____ day of _____, 1992.

Notary Public

My Commission Expires:

AFFIDAVIT

STATE OF OHIO

)

) ss

COUNTY OF MAUMEE

)

I, **PAUL DAUTERMAN**, being of full age and first duly sworn on oath, depose and state the following:

1. I worked for **Community Sanitation Services, Inc. (CSSI)** as a waste hauler from 1956 to 1969. I hauled commercial waste from late 1956 to 1969 to the **Dura Landfill**. I drove a front-end loader from the early 1960's until 1969.

2. I hauled waste from **A.P. Parts Manufacturing Company** to the **Dura Landfill**. This waste was usually scrap packaging materials for mufflers and clamps. Sometimes, the waste would be mufflers and other scrap metal parts. The waste was dumped off the dock at A.P. Parts into a roll-over.

3. I hauled waste from **Champion Spark Plug** to the **Dura Landfill**. The waste would be mostly packaging materials. The waste would contain old and broken spark plugs. The waste was always in four-yard containers and was dumped into a front-end loader.

4. I hauled waste from **City Auto Stamping Co.** to the **Dura Landfill**. This waste would be mostly general rubbish but would contain some scrap metal.

5. I hauled waste from **Flower Hospital** to the **Dura Landfill**.

6. I hauled waste from **National Laboratories** to the **Dura Landfill**. I picked up the waste from 55-gallon drums in **National Labs'** building. Some of the wastes from **National Labs** were substances resembling cleaning fluids or acids.

7. I hauled waste from **Sinclair Manufacturing Co.** to the **Dura Landfill**. Most of the wastes were broken plastic jugs that used to contain soaps and bleach.

8. I hauled waste from **Ohio Bell** to the **Dura Landfill**. The waste came from **Ohio Bell's** main location on **Tel-Star Street**. The waste was used, coated steel wire.

9. I hauled waste from Tecumseh Products Co. to the Dura Landfill.

I hereby swear that the contents of this Affidavit are true and correct and are based on my own personal knowledge.

Further affiant says not.

Paul Dauterman
Paul Dauterman

Sworn to and subscribe before me this 7 day of August, 1991
1991

Suzanne D. Lauch
Notary Public

SUZANNE D. LAUCH
My Commission Expires 2/17/93
MY COMMISSION EXPIRES FEB. 17, 1993

22967

CIC3

AFFIDAVIT

State of Ohio)
) SS
Fulton County)

^{G2726}
George Zolciak, being first duly sworn according to law,
deposes and says as follows:

1. I am a retired Sinclair Manufacturing employee. I currently reside at 12550 Soul Road, Swanton, Ohio 43558. I first worked for Sinclair from 1964 to 1965. I returned to Sinclair in 1966 and worked until 1972. I started as a material handler and later became a maintenance man. I worked in both their soap products and plastic bottle divisions. The soap products division made soap, fabric softener, ammonia, and bleach.

2. I recall that during the period 1965 thru 1968 the man in charge was Marsh Sinclair, and the president of the company was James Brown. Also Crane Kendrick and John Kelly were officers of the company. Kelly is now deceased.

3. I recall that Hercules and Monsanto were the main suppliers of plastic pellets used to make bottles. Sinclair also ground up some of their own plastic into pellets for use in the production of their plastic bottles. The plastic bottles were not biodegradable, and many of them were discarded in the waste dumpsters. It is my understanding that some of the plastic contained "P⁶BS" ^{tin}

4. I recall that periodically the plastic mold machines would have to be "purged". This was a cleaning process that was done when the machines were changed over or when the

CIC03-1

G2726

machine burned the plastic. The "purgings" were placed in the waste dumpsters.

5. I also recall the machines leaked oil onto the floor which would be cleaned up and placed into the dumpsters. All other waste, floor sweepings, and contaminated plastic were also thrown into the dumpsters.

6. I recall the waste was first picked up by Benton and then later by Community Sanitation. They would empty the waste dumpsters located at both the north and south ends of the building.

FURTHER AFFIANT SAYETH NAUGHT.

Henry J. Lisk

SWORN AND SUBSCRIBED in my presence this 5/5th day of

May, 1991.

Theresa J. Gryz

THERESA J. GRYS
Notary Public, State of Ohio
My Commission Expires November 3, 1994

CIC03-2

Sinclair Mfg.

CIC2

AFFIDAVIT

State of Ohio)
) SS
Lucas County)

Eugene A. Janowski, being first duly sworn according to law, deposes and says as follows:

1. I am a **retired Sinclair Manufacturing employee**. I currently reside at 4805 S. Crestridge Road, Sylvania, Ohio. I started working for Sinclair in 1960 and left the company in 1988 when the plant closed. I worked various jobs at Sinclair including, warehouseman, production line worker, shipping, and chemical mixer. When I left Sinclair in 1988, I was the head chemical mixer. This job required me to mix the chemicals used to make soaps, bleaches, and other products made by the company.

2. I recall the following chemicals were delivered to Sinclair for use in production of their various products. Sulfonic acid which was used to make detergents was a dark color and looked like molasses. This chemical was brought in by railroad tanker cars. Chlorine used to make bleach was also delivered by tanker car and piped into the building. Hydrochloric acid was used in the production of toilet bowl cleaners. Caustic liquid was used to make detergent and bleach was brought in by tanker cars.

3. I recall that during the production there would be "bad runs". If there was a "bad run" of bleach, the plastic containers would be ~~punctured~~ in the bottom of the bottle and drained. The plastic bottles would be thrown into the waste

CIC02-1

E.A.J.

dumpsters. Sometimes numerous pallets of products would be disposed.

4. I recall that all of the mold machines operated by hydraulics required oil. The oil would leak out of the machines and onto the floor. This hydraulic waste would then be cleaned up by a "shop vac" and dumped into the inside pit. An absorbent would then be spread on the floor to soak up the remaining oil. This absorbent would then be discarded into the dumpsters.

5. Periodically the hydraulic oil from the machines would be changed. The used oil would be placed in 55 gallon drums and stored at the rear of the bleach building. Eventually the drums and other wastes would be hauled away.

FURTHER AFFIANT SAYETH NAUGHT.

Eugene A. Janowski

SWORN AND SUBSCRIBED in my presence this 27 day of

_____, 1991.

Theresa J. Grys
THERESA J. GRYS
Notary Public, State of Ohio
My Commission Expires November 3, 1994

CIC02-2

Sinclair Mfg.

TO: Mr. Joseph M. Raidy - Samuels & Northrop Company
Mr. John Scoulen - City of Toledo - Law Department

FROM: David Weinbrecht

DATE: 4-21-95

RE: Stickney/Tyler Investigation

PERSON INTERVIEWED:

Paul Dauterman - 60 years - Now retired - 115 E. Perry Street
Walbridge, Ohio - (419) 666-3541.

Mr. Dauterman was interviewed at his home on 4-19-95. He is a cooperative witness.

Approximately 2 years ago Mr. Dauterman went to BFI's office and gave a taped statement. He has not talked with any other investigators. He stated he received a call from a person who stated he was calling from Chicago. This person advised he was with the Federal E.P.A. and would like to talk with him the next time he was in town. At this point this person has not talked with him.

Mr. Dauterman was a driver for Community Sanitation between the years 1956 to 1969. During the years, approximately 1960 to 1966, he primarily used the Dura Landfill. He did go into Tyler and Stickney, but only on occasion when he could not get into the Dura Landfill. He stated if Dura was on fire or other problems such as thick mud which made it impossible to drive in. As to the frequency of going into Tyler or Stickney, Mr. Dauterman could not remember. He recalls a few times each month. What he was hauling the exact days he was direct to Stickney or Tyler, he cannot remember, but does have a fairly good memory as to what he hauled in general. He did say that if he picked it up and took it to Dura, he is sure he took some of it to Tyler and Stickney. He identified the following items and companies.

A. P. PARTS: Scrap packing and metal in roll off containers.

ART IRON: Wood and steel that was hauled on pallets.

CHAMPION SPARKPLUG: 4 yard containers that he picked up from both inside and outside. They contained broken spark plugs and packing.

CITY AUTO STAMPING: Scrap metal and trash.

CONFORMING MATRIX: Unknown material

DURA AUTOMOTIVE HARDWARE: 55 gallon drums that contained dust, scraping from castings. He stated no liquids.

INDUSTRIAL HEAT TREATING: Unknown material

OHIO BELL: Insulated steel wire.

PINKERTON TOBACCO: Tobacco product.

REICHERT: Wood

TECUMSEH PRODUCTS: Metal shavings

TELEDYNE: Regular trash

CLEVELAND METAL ABRASIONS: Metal powder. He also described metal shot.

CWI000026

DANA: Trash and floor sweepings. Floor sweepings may have contained oil.

DUPONT: Material that came in bags. He said pigment used to produce paint color.

SHULTZ HOMES: Wood

FLOWER HOSPITAL: Normal trash.

NATIONAL LABS: Unknown material and empty barrels.

SINCLARE MANUFACTURING: Plastic jugs that were empty. He recalls that they always gave him free laundry bleach to take home.

HILFINGER: Unknown material

HAUGHTON ELEVATOR: Unknown material

Sinder mfg.

TO: Mr. Joseph M. Reidy - Samuels & Northrop Company
Mr. John Scouten - City of Toledo - Law Department

FROM: David Weinbrecht

DATE: 4-17-95

RE: Stickney/Tyler Investigation

PERSON INTERVIEWED:

Stanley F. Morawski - 72 Years - 5130 Homeside - Toledo, Ohio 43612
(419)478-2757

Mr. Morawski worked for **Community Sanitation (Now BFI)** from 1952 until 1972 when he retired. He started as a driver when they were a very small, one truck company. He was promoted to foreman six years later when they had about 20 trucks. They were the largest industrial hauler during that period of time.

As a driver Mr. Morawski got into many of Community Sanitation's customer facilities, picked up industrial waste and took it to both Tyler and Dura landfills. As a foreman, Mr. Morawski trained all new drivers and as a result got into most of their customer facilities. He frequently rode with drivers who were already trained which further exposed him to customer facilities and the places where the picked up material was picked up and to where it was taken.

Mr. Morawski is currently in good health, active, with no apparent disabilities of any kind. He was interviewed at his home on 4-14-95. I was invited in and Mr. Morawski agreed to supply any information that he could.

He advised at this point that he went to BFI offices about three years ago and was extensively interviewed by BFI, attorneys and management. Representatives from other companies were there but he does not know who. About three years ago attorneys from Gulf Oil and Teldyne interviewed him. About two years ago he was interviewed by an investigator who represent all the Dura PRP'S. Last year he was called to a meeting by representatives from the Federal EPA, from Chicago where he was again interviewed and interviewed was tape recorded. He has signed statements in the past for BFI, he thinks they also taped his interview and for the EPA.

Mr. Morawski agreed at this time to go over all that he remembers and would tell me, as closely as he can, the exact same information he supplied to all other persons who have interviewed him.

To be very specific and to narrow down the time frame, we talked specifically about a period of time ~~1968 to 1972~~. I had Mr. Morawski review a list of most of the manufacturing companies that existed in the Toledo area during that period of time. Mr. Morawski pointed out all the companies who were customers of Community Sanitation. Attached to this report is a list of those customers. Mr. Morawski feels there are more, but he named the ones he is sure of.

Mr. Morawski stated that during that period of time they went into all the area landfills, including Stevens in Michigan, King Road, Consaul Street, Dura, Tyler and Stickney, plus others. What determined which landfill they would go into would be which was closest and which ones were open that day. **During that period Community Sanitation used on a daily basis, Tyler, Stickney and Dura.** Industrial material was dumped at Dura and Tyler in equal amounts. He has no personal knowledge of industrial waste being taken into Stickney. He does know that Community Sanitation trucks did go into Stickney.

CWI000011

We reviewed each company, what their waste was and where it was taken. Mr. Morawski stated this, to the best of his knowledge, is the same information he has given the EPA.

DUPONT: Picked up paint and paint solvent material. He stated they picked up a caustic material. He advised at one time this material was spilled over the loading dock at Dupont. He walked through it wearing a new pair of shoes. This substance ate through his shoes and burned his feet. This was a regular pickup for the mentioned years. In addition to the Michigan landfills this material was taken several times per week to both Tyler and Dura landfills.

U. S. REDUCTION: Aluminum powder that smelled like ammonia and would smoke when wet. Material taken to both Tyler and Dura.

TOLEDO BLADE: Several times per week barrels of ink and ink solvents. All material taken to Dura and Tyler where barrels emptied onto the ground and barrels returned to the Blade.

LIBBY CORNING: Located in Perryshurg, Ohio. Used a regular semi-trailer and picked up drums that were taken to Tyler and Dura and emptied. The drums contained paint mixtures, solvents and other chemicals of unknown substance. These unknown chemicals would frequently catch fire. On two occasions their trucks caught fire while transporting this material.

TELEDYNE: On Laskey Road. Morawski picked up there, six days per week. He picked up Magnesium. They had closed boxes that contained other material unknown to him. All taken to Dura and Tyler.

GULF OIL: Front Street. Gulf oil scraped sludge from the bottom of their large storage tanks. Community Sanitation, on call basis, would pick up this material and take it to Dura and Tyler. Several times per month.

NATIONAL LABORATORIES: Stated they had a big factory with roll off boxes they picked up on a regular route basis. These boxes contained chemicals. Morawski does not know what kind of chemicals.

DANA CORPORATION: Bennett Road had several pickup locations around the plant. Large roll off boxes contained ashes from their furnaces. These ashes were taken to Dura and Tyler.

DOEHLER-JARVIS: They went to Smead Avenue Site and Detroit Avenue Site. They picked up all their scrap material including floor sweepings. Doehler was a casting plant and had machines that used hydraulic oil. I asked Morawski if the floor sweepings were oily and he stated yes. All material to Dura and Tyler.

FLOWER HOSPITAL: Picked up regular waste material, but they were advised to use caution as infectious material may be contained in the waste.

ANDERSONS: Several locations around town, a large local company that has large grain elevators, general stores and are a major supplier of fertilizer. Morawski stated they picked up fertilizer, and stuff that was cleaned from the factory machines and conveyor belts including unknown chemicals.

INTERCHEMICAL: A plastic manufacturing company. Morawski stated he picked up flammable chemicals that smelled like plastic.

Mr. Morawski identified the following companies, but was not sure as to the material in their waste. He did say whatever this material was, for at least 6 years it was taken to Dura and Tyler.

A. EDELSTEIN: A scrap metal company. Morawski called it a steel company. They used a front end loader for unknown material.

A.P. PARTS: An auto parts manufacturer, mufflers primarily. Used a front end loader to pick up mufflers and tailpipes.

ART IRON: A steel company. They were a pickling operation. Morowski stated some of their boxes contained chemicals which he feels was used to preserve steel.

BENDIX: Has no idea what was in their boxes, but he did pick up there and take it to Dura and Tyler.

BUNTING BEARINGS AND BRASS: Spencer Street. Normal rubbish and other material Morowski unable to identify.

TOLEDO EDISON: A lot of wire and electrical parts. Morowski did not personally pick up transformers.

CHASE PACKAGING: Manufactured paper bags. Picked up their waste, does not know what it was.

CITY AUTO STAMPING: A auto parts stamping plant. This type of plant normally has a lot of various oils including hydraulic oil in their waste. Morowski picked up there, but cannot identify the waste.

CLEVELAND METAL: Unknown waste material

CONFORMING MATRIX: Unknown waste material

COUSINS: Cousins is a hazardous waste hauler who transports mostly liquid chemicals. They have been identified by City employees as using their own trucks to dump at city landfills. Morowski went to their plant on Matzinger Road and picked up 30 yard boxes with a roll off truck and took it to Dura and Stickney.

DEVILBISS COMPANY: Manufactured paint spray guns and atomizers. Picked up there on a call in basis. Picked up bins of unknown material.

FLOWER, MERCY, PARKVIEW, RIVERSIDE, ST. VINCENTS, ST. LUKES AND TOLEDO HOSPITALS. All of their normal refuse bins, picked up with a front loader. Unknown material. Special caution was used as their were told waste contained infectious material.

GENERAL MILLS: Waste cereal and normal rubbish.

GENERAL TIRE: Unknown waste material

HUNT FOODS: Waste food. They were a tomato product food processor.

INDUSTRIAL HEAT TREATING: Unknown material in top loaded bins.

INSHELD DYE: Small amount of unknown material.

JONES AND LAUGHLIN STEEL: Unknown material

NABISCO: Food waste

OHIO BELL: A lot of copper wire. Other unknown material.

PLABELL RUBBER: Heavy waste in a front end loader. Daily. Unknown material, but they manufactured rubber parts such as washers and gaskets.

SHARON MANUFACTURING: Located in Lambertville, Michigan. A stamping plant. Metal grindings. Front end loader, 15 containers daily.

STRUCTURE MANUFACTURING: Rubbish, soap bottles and plastic. Front end loader contains.

SURFACE COMBUSTION: A large amount of grinding material. Used a backloader on a regular basis.

TOLEDO SCALE: Small containers, loaded onto a back loader. Regular rubbish only. Wood and cardboard.

Mr. Morawski feels there are more companies than listed above, but these are all that he can remember. He cannot personally say that material from any of these companies was dumped at Stickney, although Community Sanitation trucks did go into Stickney on a regular basis.

[REDACTED]

WITNESS STATEMENTStickney/Tyler Investigation

Witness was a Community Sanitation driver from 1952 until he retired. As a driver, he got into many of Community Sanitation's customer's facilities. He picked up industrial waste and took it to Tyler and other landfills. As a foreman, witness trained all their new drivers and as a result got into most of their customer's facilities. He frequently rode with the drivers who were already trained which further exposed him to customer's facilities and the places where they picked up material and where it was taken.

Witness talks specifically about a period of time, 1960-1966. He reviewed a list of most of the manufacturing companies that existed in the Toledo area during that period of time. Witness pointed out all the customers of Community Sanitation. Attached to this report is a list of those customers. Witness feels there are more but he named the ones he is sure of.

Witness stated that during that period of time, they went into all the area landfills, including Tyler and Stickney. What determined which landfill they would go into would be which was the closest and which ones were open that day. **During that period, Community Sanitation used Tyler and Stickney on a daily basis.** Industrial material was dumped at Tyler. He has no personal knowledge of industrial waste being taken into Stickney. He does know that Community Sanitation trucks did go into Stickney.

DuPont: picked up paint and paint solvent material. He stated that they picked up a caustic material. He advised at one time this material was spilled over the loading dock. He walked through it wearing a new pair of shoes. The substance ate through his shoes and burned his feet. This was a regular pickup for the mentioned years. This material was taken several times per week to Tyler.

U.S. Reduction: aluminum powder that smelled like ammonia and would smoke when wet. Material taken to Tyler.

Toledo Blade: several times per week barrels of ink and ink solvents. The barrels were taken to Tyler where they were emptied onto the ground and then returned to the Blade.

Libby Corning: located in Perrysburg, Ohio. Used a regular semi-trailer and picked up drums that were taken to Tyler and emptied. The drums contained paint mixtures, solvents and other unknown chemicals. These unknown substances would frequently catch fire. On two occasions, their trucks caught fire while transporting this material.

PRIVILEGED AND CONFIDENTIAL
ATTORNEY-CLIENT COMMUNICATION
CW06-1

Teledyne: Laskey Road. Witness picked up there six days per week. He picked up magnesium. They had closed boxes that contained other material unknown to him. All was taken to Tyler.

Gulf Oil: Front Street. Gulf Oil scraped sludge from the bottom of their large storage tanks. Community Sanitation, on a call basis, would pick up this material and take it to Tyler, several times per month.

National Laboratories: They had a big factory with roll-off boxes that were picked up on a regular route basis. These boxes contained chemicals.

Dana Corporation: Bennett Road had several pickup locations around the plant. Large roll-off boxes contained ashes from their furnaces. These ashes were taken to Tyler.

Doehler-Jarvis: They went to Smead Avenue Site and Detroit Avenue Site. They picked up all their scrap material including floor sweepings. Doehler was a casting plant and had machines that used hydraulic oil. This material, including the oily floor sweepings were taken to Tyler.

Flower Hospital: Picked up regular waste material, but they were advised to use caution, as infectious material may be contained in the waste.

Andersons: They picked up from several locations around town. The Andersons is a large company that has large grain elevators, general stores and are a major supplier of fertilizer. Witness stated they picked up fertilizer and stuff that was cleaned from the factory machines and conveyor belts, including unknown chemicals.

Interchemical: a plastic manufacturing company. Witness stated that he picked up flammable chemicals that smelled like plastic.

Witness identified the following additional companies but was not sure as to the material in their waste. Whatever they were dumping, it was taken to Tyler between 1960 and 1966.

A. Edelstein: a scrap metal company. They used a front end loader for unknown material.

A. P. Parts: an autoparts manufacturer, mufflers primarily. Used a front end loader to pick up mufflers and tailpipes.

Art Iron: a steel company. They were a pickling operation. Witness believes that some of their boxes contained chemicals which he feels were used to preserve steel.

Bendix: Witness has no idea what was in their boxes, but he did pick them up and take them to Tyler.

Bunting Bearings and Brass: Spencer Street. Normal rubbish and other material which the witness was unable to identify.

Toledo Edison: A lot of wire and electrical parts. Witness did not personally pick up transformers.

Chase Packing: manufactured paper bags. Picked up their waste. Does not know what it was.

City Auto Stamping: an autoparts stamping plant. This type of plant normally had a lot of various oils, including hydraulic oils in their waste. Witness picked up there, but cannot identify the waste.

Cleveland Metal: unknown waste material.

Conforming Matrix: unknown waste material.

Cousins Waste Control: Cousins is a hazardous waste hauler who transports mostly liquid chemicals. Witness went to their plant on Matzinger Road and picked up 30 yard boxes with a roll-off truck and took them to Stickney.

DeVilbiss Company: Manufactured paint spray guns and atomizers. Picked up there on a call basis. Picked up bins of unknown material.

Flower, Mercy, Parkview, Riverside, St. Vincent's, St. Luke's and Toledo Hospitals: all their normal refuse bins, picked up with a front loader. Unknown material. Special caution was used as they were told waste contained infectious material.

General Mills: waste cereal and normal rubbish.

General tire: unknown waste material.

Hunt Foods: waste food. They were a tomato product food processor.

Industrial Heat Treating: Unknown material in top-loaded bins.

Inshield Dye: small amount of unknown material.

Jones & Laughlin Steel: unknown material.

Nabisco: food waste.

Ohio Bell: a lot of copper wire and other unknown material.

Playbell Rubber: heavy waste in a front end loader. Went there daily. Unknown material, but they manufactured rubber parts, such as washers and gaskets.

Sharon Manufacturing: located in Lambertville, Michigan. A stamping plant. Picked up metal grindings with a front end loader. Fifteen containers daily.

Sinclair Manufacturing: rubbish, soap bottles and plastic. Front end loader containers.

Surface Combustion: a large amount of grinding material. Used a back loader on a regular basis.

Toledo Scale: small containers, loaded onto a back loader. Regular rubbish only. Wood and cardboard.

Sinclair Hfg.

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SINCLAIR MANUFACTURING ASSOCIATES, INC.

2650 N. REYNOLDS ROAD / TOLEDO, OHIO 43615
AREA CODE 419 537-1211JAMES L. BROWN
Chairman

September 7, 1993

Ms. Marsha A. Adams
Responsible Party Search Section
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

RECEIVED
SEP 10 1993SUPERFUND PROGRAM
MANAGEMENT BRANCH

Attention of: 5HSM-5J

RE: Request for Information Pursuant to Section 104(e) of
CERCLA, for the Stickney Avenue Landfill and the Tyler
Street Dump Sites of Toledo, Ohio

Dear Ms. Adams:

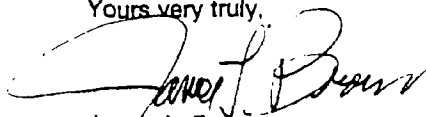
This letter will acknowledge receipt of the form letter from Thomas W. Mateer, Chief, Superfund Program Management Branch, United States Environmental Protection Agency, Region 5, date-stamped August 12, 1993, addressed to the name "Sinclair Manufacturing & Associates, Inc.". In response to the requests for information stated in that letter, please be advised that this responding Company, Sinclair Manufacturing Associates, Inc., was formed as a new food and household products business on September 6, 1977, when Articles of Incorporation were filed with the Secretary of State of Ohio. Copies of the original articles are enclosed. Although the Company was originally authorized to engage in manufacturing, it has never done so and has engaged only in the business of brokerage of food and household products. In its brokerage business the Company does not take title to or possession of the food and household products in which it deals. There have never been any amendments of or to the original articles of incorporation.

Sinclair Manufacturing Associates, Inc., is and has been since inception an independent and privately owned business which has never been a subsidiary of any other corporation and has never had any subsidiaries of its own. It has never had any corporate shareholders. The Company's only facilities have been offices and the Company has never owned or operated any manufacturing or warehousing facilities of any kind. The only waste generated by the Company has been the ordinary paper waste associated with office work. Its only employees have been its sales personnel and its office staff. The Company has never purchased, produced, formulated, processed, generated, used, transported, treated, stored, disposed or otherwise handled hazardous substances, pollutants or contaminants, or solid wastes that may have been taken to or received by the Stickney Avenue Landfill and Tyler Street Dump sites between 1977 (formation of the Company) and 1981.

Ms. Marsha A. Adams
September 7, 1993
Page 2

I believe that this letter contains a complete response to the substance of your inquiry and it is intended to serve as an affidavit of the facts stated.

Yours very truly,


James L. Brown

JLB:jaj

Enclosures

State of Ohio
County of Lucas

Before me personally appeared James L. Brown, Chairman of Sinclair Manufacturing Associates, Inc., who, being first duly sworn, stated that the facts set forth in the foregoing letter are true, as he verily believes.

9-7-93

Date


Notary Public

JOYCE A. JAQUA
State of Ohio

My Commission Expires ~~9/7/92~~

10/14/93

CERTIFIED MAIL
RETURN RECEIPT REQUESTED



SINCLAIR MANUFACTURING ASSOCIATES, INC.

2650 N. REYNOLDS ROAD / TOLEDO, OHIO 43615
AREA CODE 419 537-1211JAMES L. BROWN
Chairman

September 7, 1993

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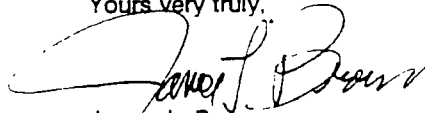
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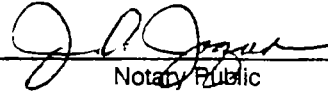
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9-7-93

Date


Notary Public

JOYCE A. JAQUA
State of Ohio

My Commission Expires ~~9/7/98~~

10/14/93

CERTIFIED MAIL
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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
WESTERN DIVISION

**BOARD OF LUCAS COUNTY
COMMISSIONERS,**

One Government Center, Suite 800
Toledo, Ohio 43604

Plaintiff,

vs.

ALLIEDSIGNAL INC.

on its own behalf, on behalf of

GRIMES AEROSPACE COMPANY,

a wholly-owned subsidiary and successor
in interest to FL Aerospace Corporation,
and as successor in interest to

ALLIED CHEMICAL AND DYE CORPORATION,

ALLIED CHEMICAL CORPORATION,

ALLIED CORPORATION, and

THE PRESTOLITE COMPANY

c/o C T Corporation System, Statutory Agent

1300 East 9th Street

Cleveland, OH 44114

and

ALLEGHENY TELEDYNE INCORPORATED,

on its own behalf, and

as successor in interest to

TELEDYNE, INC.

c/o C T Corporation System, Statutory Agent

1300 E. 9th Street

Cleveland, OH 44114

and

Case No. 3:99CV7001

[Hon. Donald C. Nugent]

**FIRST AMENDED COMPLAINT
FOR DAMAGES AND
DECLARATORY JUDGMENT**

Julia R. Bates (0013426)

Lucas County Prosecutor

Steven J. Papadimos (0005317)

Civil Division Chief

Andrew K. Ranazzi (0040617)

Assistant Prosecuting Attorney

Lance M. Keiffer (0042730)

Assistant Prosecuting Attorney

700 Adams Street, Suite 250

Toledo, OH 43624

Counsel for Plaintiff

)
AP AUTOMOTIVE SYSTEMS, INC.,)
on its own behalf, and)
as successor in interest to)
AP PARTS MANUFACTURING COMPANY)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)

)
and)
)

ART IRON, INC.)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)
)

)
and)
)

BEAZER EAST, INC.,)
on its own behalf, and)
as successor in interest to)
KOPPERS CO., INC, and)
DURA CORPORATION,)
a wholly-owned subsidiary of **KIDDE, INC.**)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)
)

)
and)
)

BROWNING-FERRIS INDUSTRIES OF)
NORTH AMERICA, INC.,)
on its own behalf, and)
as successor in interest to)
COMMUNITY SANITATION SERVICE, INC.,)
CSS, INC.,)
COMMUNITY SANITATION SERVICE, INC. (II),)
COMMUNITY SANITATION SERVICE OF)
OHIO and MICHIGAN, INC., and)
BROWNING-FERRIS INDUSTRIES OF)
OHIO and MICHIGAN, INC.)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)

)
and)
)
CHEVRON U.S.A. INC.,)
on its own behalf, and)
as successor in interest to)
GULF OIL CORPORATION)
c/o Prentice-Hall Corp. System, Stat. Agent)
16 E. Broad Street)
Columbus, OH 43215)
)
and)
)
COMMERCIAL OIL SERVICE, INC.)
c/o Kurt S. Gottschalk, Statutory Agent)
420 Madison Avenue)
Toledo, OH 43604)
)
and)
)
COUSINS INDUSTRIAL WASTE)
REMOVAL COMPANY)
c/o Barry Cousins, President)
4347 Old Saybrook Drive)
Toledo, OH 43623)
)
and)
)
CYTEC INDUSTRIES INC.)
on its behalf, and)
as successor in interest to)
AMERICAN CYANAMID COMPANY)
c/o Prentice-Hall Corp. System, Stat. Agent)
16 E Broad Street)
Columbus. OH 43215)
)
and)
)
DAIMLERCHRYSLER CORPORATION,)
on its own behalf, and)
as successor in interest to)
CHRYSLER CORPORATION, and)
AMERICAN MOTORS CORPORATION)
c/o C T Corporation System, Statutory Agent)
1300 E. 9 th Street)
Cleveland, OH 44114)

and
DANA CORPORATION
c/o Martin J. Strobel, Statutory Agent
4500 Dorr Street
Toledo, OH 43615

and
DARLING INTERNATIONAL INC.
on its own behalf, and
as successor in interest to
DARLING-DELAWARE CO. INC., and
DARLING & COMPANY
c/o C T Corporation System, Statutory Agent
1300 E. 9th Street
Cleveland, OH 44114

and
THE DIAL CORPORATION,
on its own behalf, and
as successor in interest to
THE SINCLAIR MANUFACTURING COMPANY
c/o National Register Agents Inc.
145 Baker Street
Marion, OH 43302

and
E.I. du PONT de NEMOURS and COMPANY
c/o C T Corporation System, Statutory Agent
1300 E. 9th Street
Cleveland, OH 44114

and
ENVIROSAFE SERVICES OF OHIO, INC.,
on its own behalf, and
as successor in interest to
FONDESSY ENTERPRISES, INC.
c/o C T Corporation System, Statutory Agent
1300 E. 9th Street
Cleveland, OH 44114

and)
)
FEDERAL-MOGUL CORPORATION,)
on its own behalf, and)
as successor in interest to)
COOPER INDUSTRIES, INC., and)
SHARON MANUFACTURING COMPANY)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)
)

and)
)
GENCORP INC.,)
on its own behalf, and)
as successor in interest to)
THE GENERAL TIRE & RUBBER COMPANY)
c/o William R. Phillips, Statutory Agent)
175 Ghent Road)
Fairlawn, OH 44333-3300)
)

and)
)
GENERAL MILLS INC.)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)
)

and)
)
GENERAL MOTORS CORPORATION)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)
)

and)
)
HUNT-WESSON, INC.)
c/o Prentice-Hall Corp. Systems, Stat. Agent)
16 E. Broad Street)
Columbus, OH 43215)
)

and)
)

ILLINOIS TOOL WORKS INC.,)
on its own behalf, and on behalf of its)
division/line of business **DeVILBISS**)
c/o Robin R. Lunn, Statutory Agent)
Two North LaSalle Street)
Chicago, IL 60602)

and)

THE KROGER CO.)
c/o Paul W. Heldman, Statutory Agent)
1014 Vine Street)
Cincinnati, OH 45201)

and)

LIBBEY GLASS, INC.)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)

and)

CITY OF MAUMEE, OHIO)
c/o Maumee City Law Director)
Sheilah H. McAdams, Esq.)
204 West Wayne Street)
Maumee, OH 43537)

and)

NL INDUSTRIES, INC.,)
on its own behalf, and)
as successor in interest to)
DOEHLER – JARVIS)
c/o Prentice-Hall Corp. Systems, Stat. Agent)
16 E. Broad Street)
Columbus, OH 43215)

and)

NATIONAL LABORATORIES, INC.,
a division of Natural Laboratories, Inc.,
nka John Brown Enterprises, Inc.
c/o John T. Brown, Statutory Agent
951 N. Bend Rd.
Cincinnati, OH 45224

and

R.H. OBERLY COMPANY, INC.
c/o R. H. Oberly, Statutory Agent
2858 South 109th Street
Toledo, OH 43611

and

THE OHIO BELL TELEPHONE COMPANY
c/o PUCO, Statutory Agent
180 East Broad Street
Columbus, OH 43215

and

OWENS-ILLINOIS, INC.
c/o C T Corporation System
1300 E. 9th Street
Cleveland, OH 44114

and

PILKINGTON HOLDINGS, INC.
on its own behalf, and on behalf of
LIBBEY OWENS FORD CO.,
a wholly-owned subsidiary and successor
in interest to **LOF GLASS, INC.**
c/o C T Corporation System
1300 E. 9th Street
Cleveland, OH 44114

and

THE PINKERTON TOBACCO COMPANY
c/o C T Corporation System
1300 E. 9th Street
Cleveland, OH 44114

and)
)
RANSOM & RANDOLPH COMPANY)
a wholly-owned subsidiary of)
DENTSPLY INTERNATIONAL, INC.)
c/o C T Corporation System)
1300 E. 9th Street)
Cleveland, OH 44114)

and)
)
D.E. ROSE & CO., INC.)
on its own behalf and)
as successor in interest to)
A. MINDEL & SON, INC.)
c/o Donald C. Price, Statutory Agent)
737 Leader Bldg.)
Cleveland, OH 44114)

and)
)
RUDOLPH-LIBBE, INC.)
c/o James Hammer, Statutory Agent)
112 E. Oak Street)
Bowling Green, OH 43402)

and)
)
SC HOLDINGS, INC.,)
on its own behalf, and)
as successor in interest to)
BENTON'S VILLAGE SANITATION SERVICE, INC.)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)

and)
)
SAFETY-KLEEN ENVIROSYSTEMS COMPANY,)
on its own behalf, and)
as successor in interest to)
INLAND CHEMICAL CORPORATION)
c/o C T Corporation System, Statutory Agent)
1300 E. 9th Street)
Cleveland, OH 44114)

)
and)
)
THE SINCLAIR MANUFACTURING CO.)
c/o Richard S. Baker)
2819 Falmouth Road)
Toledo, OH 43615)
)
and)
)
SUN OIL COMPANY)
c/o C T Corporation System)
1300 E 9 th Street)
Cleveland, OH 44114)
)
and)
)
THE CITY OF SYLVANIA, OHIO)
c/o Sylvania City Law Director)
James Moan, Esq.)
6730 Monroe Street)
Sylvania, Ohio 43560)
)
and)
)
TECUMSEH PRODUCTS COMPANY)
on its own behalf, and on behalf of its)
division THE ACKLIN STAMPING COMPANY)
c/o C T Corporation System)
1300 E 9 th Street)
Cleveland, OH 44114)
)
and)
)
CITY OF TOLEDO, OHIO)
c/o Toledo City Law Director)
Edward M. Yosses, Esq.)
City of Toledo Law Dept., Suite 2250)
One Government Center)
Toledo, OH 43604-2293)
)
and)
)

THE TOLEDO BLADE COMPANY)
c/o H.O. Davis, Statutory Agent)
541 Superior Street)
Toledo, OH 43660)
)
and)
)
THE TOLEDO EDISON COMPANY)
c/o PUCO, Statutory Agent)
180 East Broad Street)
Columbus, OH 43215)
)
and)
)
TRINOVA CORPORATION)
on its own behalf, and)
as successor in interest to)
LIBBEY OWENS FORD GLASS COMPANY, and)
LIBBEY OWENS FORD COMPANY)
c/o James M. Oathout, Statutory Agent)
3000 Strayer)
Maumee, Ohio 43537.)
)
and)
)
THE UNIVERSITY OF TOLEDO)
c/o The Ohio Attorney General)
Betty Montgomery, Esq.)
30 East Broad Street, 25th Floor)
Columbus, OH 43215-3428)
)
and)
)
WASTE MANAGEMENT OF OHIO, INC.,)
c/o C T Corporation System)
1300 E 9th Street)
Cleveland, OH 44114)
)
Defendants.)
)

**FIRST AMENDED COMPLAINT
FOR DAMAGES AND DECLARATORY JUDGMENT**

For its complaint against Defendants named herein, Plaintiff, Lucas County Commissioners allege as follows:

NATURE OF THE ACTION

1. This is a civil action for recovery of costs and declaratory relief brought pursuant to Sections 107(a) and 113(f) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9607(a) and 9613(f), as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499 ("CERCLA"), as well as for recovery of restitution, indemnification, and contribution. Plaintiff seeks to recover the costs which it has incurred, and will incur, in response to the release or threatened release of hazardous substances at the King Road Site, 3535 King Road, Sylvania Township, Lucas County, Ohio (the "Site"), as well as the amount by which Defendants have been unjustly enriched by the actions of Plaintiff and indemnification and contribution from Defendants for Plaintiff's clean-up of the Site.

JURISDICTION AND VENUE

2. This Court has jurisdiction over this action pursuant to Section 113(b) of CERCLA, 42 U.S.C. § 9613(b), and 28 U.S.C. § 1331.

3. Venue is proper in the Northern District of Ohio pursuant to Section 113(b) of CERCLA, 42 U.S.C. § 9613(b), and 28 U.S.C. § 1391, because releases of hazardous substances have occurred at the Site, which is in this district.

PARTIES

4. Plaintiff, Board of Lucas County Commissioners, is a three-member elected body, organized under Chapter 305 of the *Ohio Revised Code*, in which is vested by law the authority to conduct the governmental affairs of Lucas County, Ohio. Among its governmental authority is the right to bring legal action on its own behalf and on behalf of the people of Lucas County.

5. Defendant, AlliedSignal Inc, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, AlliedSignal Inc. operates Grimes Aerospace Company, successor in interest to FL Aerospace Corporation, as a wholly-owned subsidiary, and is successor in interest to Allied Chemical and Dye Corporation, Allied Chemical Corporation, Allied Corporation and The Prestolite Company.

6. Defendant, Allegheny Teledyne Incorporated, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114. Upon information and belief, Allegheny Teledyne Incorporated is successor in interest to Teledyne, Inc.

7. Defendant, AP Automotive Systems. Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, AP Automotive Systems. Inc. is successor in interest to AP Parts Manufacturing Company.

8. Defendant, Art Iron, Inc., is an Ohio corporation, whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114.

9. Defendant, Beazer East, Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, Beazer East, Inc. is successor in interest to Koppers Co., Inc. and Dura Corporation, a wholly-owned subsidiary of Kidde, Inc.

10. Defendant, Browning-Ferris Industries of North America, Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, Browning-Ferris Industries of North America, Inc. is successor in interest to Community Sanitation Service, Inc., CSS, Inc., Community Sanitation Service, Inc. (II), Community Sanitation Service of Ohio and Michigan, Inc., and Browning-Ferris Industries of Ohio and Michigan, Inc.

11. Defendant, Chevron U.S.A. Inc., is a Pennsylvania corporation whose statutory agent is Prentice-Hall Corp. System, 16 E. Broad Street, Columbus, Ohio 43215. Upon information and belief, Chevron U.S.A. Inc. is successor in interest to Gulf Oil Corporation.

12. Defendant, Commercial Oil Service, Inc., is an Ohio corporation whose statutory agent is Kurt S. Gottschalk, 420 Madison Avenue, Toledo, OH 43604.

13. Defendant, Cousins Industrial Waste Removal Company, is an Ohio corporation whose president is Barry Cousins, 4347 Old Saybrook Drive, Toledo, OH 43623.

14. Defendant, Cytec Industries Inc., is a Delaware corporation whose statutory agent is Prentice-Hall Corp. System, 16 E. Broad Street, Columbus, OH

43215. Upon information and belief, Cytec Industries Inc. is successor in interest to American Cyanamid Company.

15. Defendant, DaimlerChrysler Corporation, is a Delaware corporation whose statutory agent is CT Corporation System, 1300 East 9th Street, Cleveland, Ohio

44114. Upon information and belief, DaimlerChrysler Corporation is successor in interest to Chrysler Corporation and American Motors Corporation.

16. Defendant, Dana Corporation, is a Virginia corporation whose statutory agent is Martin J. Strobel, 4500 Dorr Street, Toledo, OH 43615.

17. Defendant, Darling International Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio

44114. Upon information and belief, Darling International Inc. is successor in interest to Darling-Delaware Co. Inc., and Darling & Company.

18. Defendant, The Dial Corporation, is a Delaware corporation whose statutory agent is National Register Agents Inc., 145 Baker Street, Marion, OH 43302. Upon information and belief, The Dial Corporation is successor in interest to The Sinclair Manufacturing Company.

19. Defendant, E.I. du Pont de Nemours and Company, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114.

20. Defendant, Envirosafe Services of Ohio, Inc., is an Ohio corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, Envirosafe Services of Ohio, Inc. is successor in interest to Fondessey Enterprises, Inc.

21. Defendant, Federal-Mogul Corporation, is a Michigan corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, Federal Mogul Corporation is successor in interest to Cooper Industries, Inc. and Sharon Manufacturing Company.

22. Defendant, GenCorp Inc., is an Ohio corporation whose statutory agent is William R. Phillips, 175 Ghent Road, Fairlawn, OH 44333-3300. Upon information and belief, GenCorp Inc. is successor in interest to The General Tire & Rubber Company.

23. Defendant, General Mills, Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114.

24. Defendant, General Motors Corporation, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114.

25. Defendant, Hunt-Wesson, Inc., is a Delaware corporation whose statutory agent is Prentice-Hall Corp. System, 16 E. Broad Street, Columbus, Ohio 43215.

26. Defendant, Illinois Tool Works Inc., is a Delaware corporation whose statutory agent is Robin R. Lunn, Two North LaSalle Street, Chicago, IL 60602. Upon information and belief, Illinois Tool Works Inc. operates a division/line of business DeVilbiss.

27. Defendant, The Kroger Co., is an Ohio company whose statutory agent is Paul W. Heldman, 1014 Vine Street, Cincinnati, OH 45201.

28. Defendant, Libbey Glass, Inc., is an Ohio corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114.

29. Defendant, City of Maumee, Ohio, is a municipal corporation organized under, and existing by virtue of, the laws of the State of Ohio whose statutory agent is the City Law Director, Sheilah H. McAdams, 204 West Wayne Street, Maumee, Ohio 43537.

30. Defendant, NL Industries, Inc., is a New Jersey corporation whose statutory agent is Prentice-Hall Corp. System, 16 E. Broad Street, Columbus, Ohio 43215. Upon information and belief, NL Industries is successor in interest to Doehler-Jarvis.

31. Defendant, National Laboratories, Inc., is a division of Natural Laboratories, Inc., nka John Brown Enterprises, Inc., an Ohio corporation, whose statutory agent is John T. Brown, 951 N. Bend Rd., Cincinnati, OH 45224.

32. Defendant, R.H. Oberly Company, Inc., is an Ohio corporation whose statutory agent is Robert H. Oberley, 2858 South 109th Street, Toledo, OH 43611.

33. Defendant, The Ohio Bell Telephone Company, is an Ohio utility company whose statutory agent is the Public Utilities Commission of Ohio, 180 East Broad Street, Columbus, OH 43215.

34. Defendant, Owens-Illinois, Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114.

35. Defendant, Pilkington Holdings, Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114. Upon information and belief, Pilkington Holdings, Inc. operates Libbey Owens Ford Co., successor in interest to LOF Glass, Inc., as a wholly-owned subsidiary.

36. Defendant, The Pinkerton Tobacco Company, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114.

37. Defendant, Ransom & Randolph Company, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114. Upon information and belief, Ransom & Randolph Company is a wholly-owned subsidiary of DENTSPLY International, Inc.

38. Defendant, D.E. Rose & Co., Inc., is an Ohio corporation whose statutory agent is Donald C. Price, 737 Leader Bldg., Cleveland, OH 44114. Upon information and belief, D.E. Rose & Co., Inc. is successor in interest to A. Mindel & Son, Inc.

39. Defendant, Rudolph-Libbe, Inc., is an Ohio corporation whose statutory agent is James Hammer James Hammer, Statutory Agent 112 E. Oak Street, Bowling Green, OH 43402.

40. Defendant, SC Holdings, Inc., is a Pennsylvania corporation, whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, SC Holdings, Inc. is successor in interest to Benton's Village Sanitation Service, Inc.

41. Defendant, Safety-Kleen Envirosystems Company, is a California corporation whose statutory agent is C T Corporation System, 1300 East 9th Street, Cleveland, Ohio 44114. Upon information and belief, Safety-Kleen Envirosystems Company is successor in interest to Inland Chemical Corporation.

42. Defendant, Sun Oil Company, is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114.

43. Defendant, City of Sylvania, Ohio, is a municipal corporation organized under, and existing by virtue of, the laws of the State of Ohio whose statutory agent is the City Law Director, James Moan, 6730 Monroe Street, Sylvania, Ohio 43560.

44. Defendant, Tecumseh Products Company, is a Michigan corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114. Upon information and belief, Tecumseh Products Company operates a division The Acklin Stamping Company.

45. Defendant, City of Toledo, Ohio, is a municipal corporation organized under, and existing by virtue of, the laws of the State of Ohio whose statutory agent is the City Law Director, Edward M. Yosses, City of Toledo Law Department, Suite 2250, One Government Center, Toledo, Ohio 43604-2293.

46. Defendant, The Toledo Blade Company, is an Ohio corporation whose statutory agent is H.O. Davis, 541 Superior Street, Toledo, OH 43660.

47. Defendant, The Toledo Edison Company, is an Ohio utility corporation whose statutory agent is the Public Utilities Commission of Ohio, 180 East Broad Street, Columbus, OH 43215.

48. Defendant, TRINOVA Corporation, is an Ohio corporation whose statutory agent is James M. Oathout, 3000 Strayer, Maumee, Ohio 43537. Upon information and belief, TRINOVA Corporation is successor in interest to Libbey Owens Ford Glass Company and Libbey Owens Ford Company.

49. Defendant, The University of Toledo, is an Ohio university whose statutory agent is the Ohio Attorney General, Betty Montgomery, Esq., 30 East Broad Street, 25th Floor, Columbus, OH 44114.

50. Defendant, Waste Management of Ohio, Inc., is a Delaware corporation whose statutory agent is C T Corporation System, 1300 E. 9th Street, Cleveland, OH 44114.

GENERAL ALLEGATIONS

51. The site is located at 353 King Road, Sylvania Township, Lucas County, Sylvania, Ohio.

52. From approximately 1954 through 1976 Lucas County operated a municipal landfill at the Site. The defendants, their departments, divisions, subsidiaries and/or predecessors, directly or by contract or agreement or otherwise, generated, transported or otherwise sent and disposed of many types of liquid and solid wastes containing hazardous substances as defined by federal and state law to include Section 101(14) of CERCLA, 42 U.S.C. section 9601(14) at the Site. These hazardous substances have been released and threaten to be released at the Site.

53. Lucas County has incurred expenses or response costs for the control, investigation, and remediation of the Site caused by the release or threatened release of these substances. These include, but are not limited to:

- (A) installation of a security fence and its subsequent maintenance;
- (B) a remedial investigation (RI) and supplemental RI with reports to Ohio EPA;
- (C) design, construction, operation and maintenance of a force-main interceptor and pump station;
- (D) installation of an explosive gas system;
- (E) care and maintenance of the site; and

(F) investigation of who sent wastes and hazardous substances to the Site and the nature of those substances and wastes.

54. In December 1992, Lucas County and the State of Ohio, on behalf of the Ohio Environmental Protection Agency (OEPA), entered into a Consent Order in case number 89-1192 which required it perform actions to study, secure and abate conditions at the Site. Lucas County subsequently entered into an Administrative Consent Order or ACO with OEPA to take other actions to include those associated with explosive gas. (Collectively the "Consent Orders".)

55. Lucas County incurred response costs, continues to incur response costs, and will incur future response costs under the Consent Orders and otherwise at the Site.

56. To date the County has incurred expenses in excess of \$2,000,000. Future work and response costs will be required under the Consent Order to implement a remedy whose costs may exceed the monies currently spent.

COUNT I: CERCLA SECTION 107(a)

57. Plaintiff incorporates by reference the allegations of paragraphs 1 through 56 above.

58. Each named Defendant is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

59. The Site is a "facility" within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

60. There has been a "release" or "threatened release" of "hazardous substances" at the Site within the meaning of Sections 101(22) and (14) of CERCLA, 42 U.S.C. § 9601(22) and (14).

61. As a result of the release or threatened release of hazardous substances at the Site, and pursuant to the terms of the AOC, Plaintiff has incurred and will continue to incur necessary costs of response to remediate the Site, which costs have been and will continue to be incurred consistent with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR § 300.1 *et seq.* (the "NCP").

62. Defendants are each liable under Section 107(a) of CERCLA, 42 U.S.C. §9607(a), as (1) persons; (2) successors in interest to persons; or (3) persons otherwise responsible for the liabilities of persons; who by contract, agreement, or otherwise (1) arranged for the disposal or treatment; (2) arranged with a transporter for the transport for disposal or treatment; or (3) accepted for transport to the Site, hazardous substances owned or possessed by such persons, or by any party or entity, and that were disposed of or treated at the Site.

63. Each Defendant is strictly and jointly and severally liable under Section 107(a) of CERCLA, 42 U.S.C. §9607(a), for the response costs that Plaintiff has incurred and will continue to incur in response to the release or threatened release of hazardous substances from the Site.

**COUNT II: DECLARATORY RELIEF FOR FUTURE
DAMAGES RECOVERABLE UNDER CERCLA SECTION 107(a)**

64. Plaintiff incorporates by reference the allegations of paragraphs 1 through 63 above.

65. Defendants are each strictly, jointly, and severally liable to Plaintiff under the principles set forth in CERCLA Section 107(a) for the future necessary costs of response which are expected to be incurred by Plaintiff.

66. An actual, substantial legal controversy now exists between Plaintiff and Defendants, in that Plaintiff alleges that Defendants are liable under CERCLA Section 107(a) for the past and future necessary costs of response arising from the release or threatened release of hazardous substances at the Site. Accordingly, Plaintiff is entitled to a judicial declaration of its legal rights in this matter with respect to Defendants pursuant to 28 U.S.C. § 2201 and 42 U.S.C. § 9613(g).

COUNT III: CERCLA SECTION 113(f)

67. Plaintiff incorporates by reference the allegations of Paragraphs 1 through 66 above.

68. Each Defendant is liable to Plaintiff in contribution under Section 113(f) of CERCLA, 42 U.S.C. § 9613(f), for its individual, several, and equitable share of the cost of the Work performed by Plaintiffs under the terms of the AOC at the Site in response to the release or threatened release of hazardous substances.

**COUNT IV: DECLARATORY RELIEF FOR FUTURE
DAMAGES RECOVERABLE UNDER CERCLA SECTION 113(f)**

69. Plaintiff incorporates by reference the allegations of paragraphs 1 through 68 above.

70. Defendants are each strictly liable to Plaintiff under the contribution principles set forth in CERCLA Section 113(f) for their individual, several, and equitable shares of the future necessary costs of response which are expected to be incurred by

Plaintiff.

71. An actual, substantial legal controversy now exists between Plaintiff and Defendants, in that Plaintiff alleges that Defendants are liable under CERCLA Section 113(f) for their equitable share of the past and future necessary costs of response arising from the release or threatened release of hazardous substances at the Site. Accordingly, Plaintiff is entitled to a judicial declaration of its legal rights in this matter with respect to Defendants pursuant to 28 U.S.C. § 2201 and 42 U.S.C. § 9613(g).

COUNT V: UNJUST ENRICHMENT AND RESTITUTION

72. Plaintiff incorporates by reference the allegations of paragraphs 1 through 71 above.

73. Plaintiff has, to date, paid for all of the costs associated with the investigation and clean-up of the Site.

74. Defendants each contributed to the contaminated condition of the Site by disposing of, or arranging for the disposal of, waste materials including, but not limited to, hazardous substances, at the Site. -

75. Defendants, despite being responsible for the Site conditions, have not contributed to the clean-up of the Site, and have been and will continue to be unjustly enriched by Plaintiff's undertakings on their behalf in incurring damages and paying for the clean-up of the Site.

76. To the extent that Defendants have been unjustly enriched by the actions of Plaintiff, Plaintiff is entitled to restitution from each Defendant.

COUNT VI: INDEMNIFICATION AND CONTRIBUTION

77. Plaintiff incorporates by reference the allegations of paragraphs 1 through 76 above.

78. Defendants are liable, jointly and severally, for all costs incurred or to be incurred by Plaintiff related to the Site including, but not limited to, those costs incurred pursuant to CERCLA and the NCP.

79. Defendants are liable to Plaintiff for indemnification and/or contribution under state law, federal law, and general principles of equity for all costs incurred and to be incurred by Plaintiff related to the Site.

WHEREFORE, Plaintiff respectfully prays that the Court enter judgment in its favor and against Defendants as follows:

(a) Declaring that Defendants are strictly, jointly, and severally liable to Plaintiff for all response costs consistent with the NCP thus far incurred, and to be incurred, by Plaintiff, together with interest thereon;

(b) Ordering Defendants to pay Plaintiff all necessary costs of response consistent with the NCP thus far incurred and to be incurred by Plaintiff, together with interest thereon;

(c) Declaring that each Defendant is liable to Plaintiff for each Defendant's individual, several, and equitable share of all past necessary costs of response incurred by Plaintiff to address the release or threatened release of hazardous substances at the Site;

(d) Declaring, pursuant to U.S.S. § 2201 and 2202 and 42 U.S.C. § 9613(b), that Defendants are liable to Plaintiff for all past and future response costs incurred or

to be incurred by Plaintiff in investigating, remediating, and/or removing hazardous substances at the Site;

(e) Ordering each Defendant to pay Plaintiff its individual, several, and equitable share of all past and future necessary costs of response incurred or to be incurred by Plaintiff to address the release or threatened release of hazardous substances at the Site;

(f) Ordering Defendants to pay Plaintiff its expenses, witness fees, costs of suit, court costs, reasonable attorney's fees, and interest, pursuant, but not limited to, 42 U.S.C. § 9601 et seq.;

(g) Ordering Defendants to pay Plaintiff prejudgment interest pursuant, but not limited, to U.S.C. § 9607(a);

(h) Declaring that Defendants have been and will be unjustly enriched by Plaintiff as a result of Plaintiff's past and future incurrence of costs caused by the acts, omissions and conduct of Defendants related to the Site;

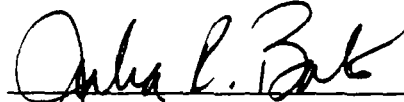
(i) Ordering Defendants to pay Plaintiff restitution in the form of monetary damages in an amount equal to the amount by which Defendants have been and will be unjustly enriched by Plaintiff's actions related to the Site;

(j) Declaring that Defendants are liable to Plaintiff for indemnification and/or contribution for all costs which it has incurred and will incur related to the Site, together with interest thereon;

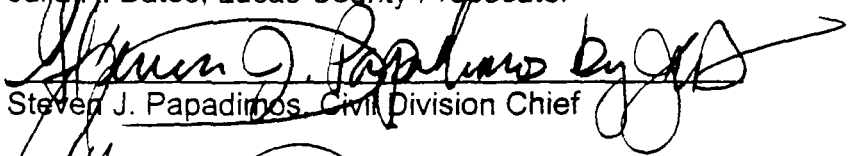
(k) Ordering Defendants to pay Plaintiff all costs which it has incurred and will incur related to the Site, together with interest thereon;

(l) Such other and further relief as this Court determines is just and necessary.

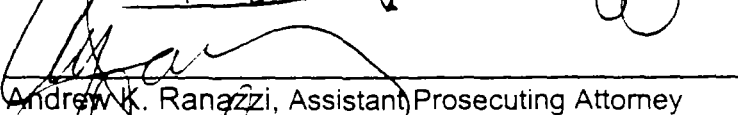
Respectfully submitted,



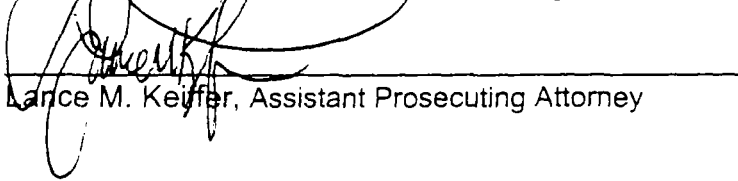
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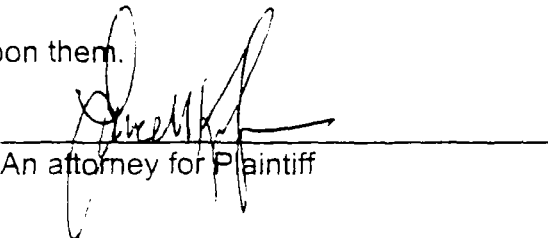
Andrew K. Ranazzi, Assistant Prosecuting Attorney



Lance M. Keiffer, Assistant Prosecuting Attorney

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing First Amended Complaint has been served this 17th day of August, 1999, by United States Mail, first-class, postage pre-paid, upon counsel of record for all parties listed therein that were also listed in the original complaint. For defendants initially named in the foregoing First Amended Complaint, a copy of the First Amended Complaint and a waiver of service form shall be timely and duly served upon them.


An attorney for Plaintiff

KING ROAD SERVICE LIST

(As of 05/18/99)

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**Dial Corporation
Probabilistic Systems Modeling Results
Proposed Allocation Scheme for Non-Settlers
Stikney and Tyler Landfill, Toledo Ohio**

March 2000

Prepared for:

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1.0 INTRODUCTION

Environmental Project Management, Inc. (EPM) is pleased to submit this report presenting the results of the probabilistic systems modeling performed on behalf of The Dial Corporation (Dial) regarding the cost allocation scheme for costs associated with the assessment and remediation of the Stickney and Tyler landfills. Dial is a defendant in cost recovery litigation initiated by a group of companies, the Stickney/Tyler Administrative Group (STAG). Plaintiffs allege that Dial is a successor to the Sinclair Manufacturing Company (Sinclair). Plaintiffs also allege that Sinclair was a generator of wastes that were disposed in the Stickney/Tyler landfills.

The purpose of the modeling was to identify an appropriate, technically defensible, estimate of the likely volume of material delivered from Sinclair to the Stickney and Tyler landfills based on the available evidence. In determining a volume estimate, only evidence of actual or possible contributions of Sinclair's wastes was utilized. Speculative evidence was not used. Additional evidence was obtained from Dial. This estimate was utilized to calculate Sinclair's percentage of the total volume contained in each landfill. This percentage was in turn used to calculate Sinclair's portion of the total clean up cost. The total clean up cost provided by STAG was adjusted to reflect the fact that some of the clean up costs were either too speculative or may not be legally recoverable.

1.1 Background Information

EPM was provided with the following documents to assist in the modeling efforts:

- Correspondence dated May 5, 1999 from Ms. Jane E. Montgomery (Montgomery Letter) of Schiff, Hardin & Waite to Defendants, (including only Attachment 1);
- Portions of the TLI Allocation Report (TLI Report) dated October 21, 1996 (portions included pages 1- 60, 196-197, 358- 421, 475-511);
- Data Summary Table of Stickney and Tyler Percentage Allocation dated August 1997;
- Stickney and Tyler Tier Analysis Spreadsheets; and,
- Response of Dial to the Dura Landfill Information Request Response dated April 14, 1993.

The information contained in these documents is briefly summarized below. In addition, portions of these documents are referenced in later sections of this report as they pertain to specific elements of the modeling process.

1.2 Focus of the Case

This case centers on the allocation of costs to potentially responsible parties (PRPs) for the assessment and remediation of the Stickney and Tyler Landfills. According to Plaintiffs' counsel, the Stickney/Tyler Allocation Group was formed in 1996 and consisted of 24 entities.



Each of the current Director Parties, or their respective predecessors-in-interest, was a member of the Allocation Group, and were adverse to each other and to all other members. The Allocation Group retained TLI Information Systems, Inc. (TLI) to perform a third party independent analysis of the evidence to identify all parties linked to the sites. TLI reviewed and summarized source documents including witness statements, affidavits and interviews; mediated certain issues with the City of Toledo; interviewed certain City of Toledo and other witnesses; reviewed issue papers, participant allocation responses, various challenges, and legal submissions; and prepared a detailed allocation report.

In October 1996, the Stickney/Tyler Administrative Group was formed. The Stickney/Tyler Allocation Group assigned its treasury to STAG. Cash-out parties, the City of Toledo, and Participating Parties assigned their claims, including claims for work done by the Stickney/Tyler Group, and the Stickney/Tyler Allocation Group, to the Director Parties. STAG implemented the approved Remedial Designs in accordance with an Administrative Order on Consent with U.S. EPA.

Page 1 of the TLI Report indicates that, in addition to STAG, evidence exists linking approximately 70 other parties to the landfills. According to the Montgomery Letter, as of May 5, 1999, STAG had settled with 37 of the other parties. The modeling effort performed by EPM was designed to assist Dial in identifying and proposing an allocation share more representative of Sinclair's possible contribution to the landfills.

1.3 Relevant Time Period for Landfill Operation

According to the TLI Report, the two landfills were in operation between 1950 and 1968. The Tyler landfill is reported to have initiated operation in 1950 and closed down sometime in the early 1960s. The Stickney landfill is reported to have begun operation in 1958 and closed down in January of 1966.

Sinclair produced consumer-cleaning products during the relevant time period. Sinclair was originally located on Brown Street in Toledo and moved its operations to Detroit and Benore Roads in 1962.

According to witness summaries contained in the TLI Report, Sinclair's primary waste consisted of empty plastic bottles, with some of them containing residual chlorine bleach. Dial has no information indicating that Sinclair delivered material to the Stickney and Tyler Landfills. Dial's records indicate that all waste material was delivered to the Dura Landfill.

The TLI Report indicates that other landfills were in operation and in use by the City of Toledo during the relevant time period. In particular, the Dura landfill is reported to have been in operation between the years 1956 through 1968. In addition, there exists a possibility that two other landfills were in operation during this same time period. Any of these landfills could have been receiving wastes from Sinclair at the exclusion of, or in addition to, the Stickney and Tyler



Landfills.

1.4 Stickney and Tyler Remediation Costs & Allocation Methodology

According to the Montgomery Letter, the total combined cost of remediation at the Stickney Tyler Landfills has been estimated at \$26 million dollars. This cost breaks out at \$14.5 million for the Stickney landfill and \$11.5 million dollars for the Tyler landfill. Page 2 of the Montgomery Letter indicates that the cost allocation demand for each defendant in this case was calculated using the following equation.

$$\text{Allocation Demand} = \text{TLI\%} \times \text{Landfill Estimated Cleanup Costs} \times 2.5 \quad \text{Eq. 1}$$

The term TLI% in the above equation stands for TLI's assigned percentage and is intended to represent each defendant's percentage contribution to the landfill. The reported purpose of the 2.5 multiplier is to account for orphan shares as well as the risk that actual costs to implement response actions at the landfills will be greater than estimated costs. The TLI% assigned to Sinclair for the Stickney landfill is **0.719%** and for the Tyler landfill it is **0.984%**. Based on this allocation scheme, the total allocation demand to Dial (as a result of being the alleged successor to Sinclair) is **\$543,537**.

As indicated by Equation 1, the TLI% is a highly significant factor for determining the allocation demand to each potentially responsible party (PRP). According to the TLI Report the TLI% was developed as a function of TLI's estimate of the volume of material deposited by each defendant in either of the two landfills. However, the volume estimate is not based on a direct calculation using high quality detailed information. Rather, the volume estimate for each defendant was based on limited evidentiary profiles and therefore is subject to a great deal of uncertainty.

1.5 Allocator's Process Estimating Defendant's Volumetric Landfill Contribution

The process utilized by TLI to develop a volumetric estimate of each defendant's contribution to each landfill involved:

1. Estimating the annual volume waste production based on the defendant's available evidentiary profile;
2. Converting the waste amount into a common unit of uncompacted cubic yards;
3. Multiplying by default deposition factors to account for the likelihood that the waste in any given year was deposited at either the Stickney or Tyler landfills or other possible alternatives;
4. Multiplying by a waste adjustment factor to account for type and constituents of waste deposited; and
5. Applying a generator/transporter adjustment factor (75% generators, 25 % transporters).



Each of the values utilized in Steps 1 through 5 are subjective estimates developed by TLI based on the set of available data. Although these values are subjective estimates, they were applied as if they are known fixed values, rather than one of a possible range of values that each variable could assume. The use of a single fixed-point value for each input variable results in a single fixed-point estimate of the volume of material sent by each defendant to each landfill. Given the limited data set, it is highly questionable that such a deterministic approach can result in an appropriate estimate of the volume of material sent by any particular defendant to the landfill.

1.6 Relationship Between the Defendant's Volumetric Estimates and the TLI%

After developing a volumetric estimate of each defendant's contribution to the landfill, TLI's approach to assigning the TLI% involved first calculating each defendant's volumetric percentage(s) by dividing the defendant's volume estimate for each landfill by each landfill's estimated total volume. Once the volumetric percentage for each defendant and landfill was determined, the TLI% was adjusted using the scheme presented on pages 22 and 23 of the TLI report. This scheme is also discussed in Section 5.3.4 of this report.

2.0 THE PROBLEM OF UNCERTAINTY

Pages 2 and 3 of the TLI Report describe the types of evidence contained in the factual record. This evidence includes, but is not limited to:

- Correspondence, internal memoranda, permits, industrial waste surveys, and other documents collected from public agencies and submitted by various parties;
- Depositions taken by the EPA;
- Transcribed interviews taken by TLI;
- Affidavits submitted by STAG participants, the City of Toledo, and the EPA; and,
- Summaries of Interviews taken by an EPA investigator and by a City of Toledo Investigator.

As stated on page 2 of the TLI Report, the factual basis for the case rests to a significant degree on the statements of individuals as provided in the interviews and contained in various documents. TLI further indicates that an overall assessment of the evidence did not lead to an absolute hierarchy of reliability. Therefore, TLI did not automatically accord more weight to certain documents or statements or less weight to others. However, pages 2 and 3 of the TLI Report provide some observations regarding the evidence. These observations are as follows:

- Most witness statements tend to be less reliable as to time periods;
- The witness summaries provided by the City of Toledo are less reliable than other evidence in accurately summarizing the witness' direct observations;
- The testimony and statements tend to be more reliable with respect to observations regarding a specific company, e.g., a witness recalling picking up waste from a company or recalling observing the company at one of the landfills; and
- Some of the volume estimates offered by the different drivers varied considerably.

With this level of variability in the available evidence, developing a volume estimate for each of the potential contributors to the landfill would be quite difficult and the **uncertainty** associated with any particular contributor could be quite high. The TLI Report acknowledges this problem when it states on Page 4, "estimating volume is an attempt to **quantify the subjectivity** inasmuch as it involves analysis of a relatively convoluted record and the use of a variety of default values, conversion factors, and quantifiers".

The "convoluted record" refers to the various documents and statements used to construct the evidentiary profiles prepared by TLI for each of the identified contributors. In addition, this record was used to develop the general methodology to the estimated volume. The evidentiary profile developed for Sinclair is contained on pages 196 through 198 of the TLI Report. The general methodology developed by TLI is summarized in Sections 1.4 and 1.5. The detailed



explanation of the general methodology is contained on pages 3 through 23 of the TLI Report.



3.0 CHALLENGING THE ASSIGNED ALLOCATION

Any defendant wishing to challenge its allocated share is likely to formulate its challenge by taking one or a combination of three positions. These positions include:

1. That the general allocation methodology is in some way improper, unfair, or unrepresentative;
2. That the parameters assigned to the defendant and input into the general allocation methodology are unrepresentative or incorrect; and/or,
3. That the allocation methodology has been improperly applied.

In proposing a more representative value for the TLI%, EPM has not focused on Position 1 as stated above. It is EPM's understanding that the STAG members and at least 37 other entities have subscribed to this methodology to a degree that permitted them to reach settlement. It is likely that there would be great reluctance on the part of STAG, TLI, and the other settling parties to make any changes to the general methodology at this point in time. However, this alone would not necessarily be a good reason for not challenging the methodology. A better reason, and the reason supported by EPM, is that an alternative methodology would be expensive, time consuming, difficult to develop and in the end would be subject to the same potential criticism as the TLI methodology, i.e., there is too much uncertainty to ensure that the methodology is fair and representative.

In consideration of the above statements, EPM has chosen to focus on the input parameters assigned to Sinclair, for input into the allocation methodology (Position 2) and to evaluate whether or not the allocation methodology as described in the TLI Report was properly applied to Sinclair (Position 3). This approach is consistent with the comments provided at the end of Section 1.4 regarding fixed input parameters.



4.0 EPM's TECHNICAL APPROACH

EPM's technical approach for this project involved the development of a Monte Carlo Simulation Model designed to solve for the volume of material delivered to the Stickney and Tyler Landfills, the recommended TLI %, and ultimately the recommended allocation amount. The Monte Carlo Simulation method is described in the following sections.

4.1 Monte Carlo Simulation

Monte Carlo Simulation is a Systems Modeling technique. Systems modeling refers to the development of mathematical models capable of predicting the behavior of real-world activities or phenomena. A mathematical model that is built around a set of fixed rules such that it always results in a specific outcome is known as a deterministic model. There are many problems in nature in which deterministic models are appropriate, such as the gravitational laws that describe precisely what happens to a falling body under certain conditions.

However, there are many situations in which deterministic models are inappropriate. These include phenomena in which a fixed set of rules may be used to describe the relationship between various input parameters (such as the allocation methodology developed by TLI), but the input parameters themselves represent *random variables*, which cannot be known in any specific case (the concept of random variables is discussed below). For these types of circumstances, mathematical models whose outcomes are determined by the laws of probability are required. Such models are referred to as probabilistic or *stochastic* models.

4.2 Random Variables

The word "random" as used in association with the term *random variables* is not a synonym for haphazard. In a mathematical or probabilistic sense, the term random variable describes individual outcomes that follow a regular pattern, under many repetitions. Simple examples of random variables include the outcomes associated with the toss of a coin or the roll of a pair of dice. The patterns associated with random variables are described by probability distributions. Therefore a random variable is an uncertain value whose outcome may take on any value within a given range, as described by a probability distribution (or more accurately a probability density function).

4.3 Probability Distributions

Probability distributions are mathematical functions that determine the relative likelihood of specific outcomes, within the range of possible values. For example the probability distribution for a pair of dice would provide the probability of rolling the number seven on any given roll (i.e., .167). In cases such as the rolling of dice, the exact probability distribution may be described. In cases involving limited data of an uncertain parameter, a theoretical probability



distribution may be assigned. In such a cases the modeler is attempting to fit a distribution to the parameter based on the available information set.

4.4 Process of Monte Carlo Simulation

Monte Carlo Simulation evaluates the interactions of the various input parameters by way of an iterative sampling process. The shape of their respective probability distributions determines the relative number of times that each value within each input parameter's range is sampled during the simulation. During the Monte Carlo simulation the process is performed many times (10,000 or more), each time sampling for new input parameters, and calculating a new value for the output parameter of interest. Each new value of the output parameter is stored in a database. Thus the simulation leads to the creation of a probability distribution for the output parameters of interest. The simulation also provides statistical data for the output parameter including measures of central location (mean, median, mode) and dispersion (variance and standard deviation). After many repetitions, the output results will converge, meaning that additional iterations will not significantly affect the shape of the distribution for the output parameter or its descriptive statistics. At this point the simulation may be terminated.



5.0 MODEL DEVELOP AND SIMULATION PROCESS

The process utilized by EPM to develop the Monte Carlo simulation model for this project involved the following steps:

- **Data Review & Summary**
- **Determine Cost Allocation Algorithm**
- **Develop Spreadsheet Deterministic Model**
- **Fit Uncertain Input Variables with Probability Distribution Functions**
- **Execute Simulation Process**

5.1 Data Review and Summary

This task involved a review, analysis, and summary, of the documents first cited in Section 1.1 of this report. The goals of the data review were as follows:

1. To gain an in depth understanding of the Allocation Methodology in order to reduce it to a calculation algorithm that would later be replicated within a computer spreadsheet;
2. To identify those uncertain input parameters (random variables) that would later be replaced by probability distributions;
3. To identify data that would assist in shaping the probability distributions that would be utilized to represent the random variables; and
4. To identify discrepancies and/or errors, if any, in the use of the available data or the allocation methodology as contained in the original Allocator's Report.

5.2 Apparent Discrepancies and/or Errors in the TLI Report

During the data review, a number of discrepancies and/or errors were discovered in the Allocator's TLI Report. The apparent discrepancies and/or errors fall into four major categories as listed below:

- Sinclair's volumetric rate of waste production and the total amount of waste that may have been delivered to the Stickney and/or Tyler landfills during the relevant time period;
- Issues regarding the calculation of Sinclair's adjusted waste volume contribution to the Stickney and/or Tyler landfills and using the appropriate waste adjustment factor and generator/transporter adjustment factors;
- Issues regarding the changing of data values when copied from one spreadsheet to another within the TLI Report;
- Numerous updated spreadsheets; and



■ Incorrect Tier Assignments



5.2.1 Sinclair's Volumetric Rate of Waste Production & Total Volume Analysis

Page 197 of the TLI Report states that TLI assumed that the volumetric rate of waste production from the former Sinclair Facility was 58.5 cubic yards per week. This volumetric flow rate of waste production is equivalent to a total waste volume to the Stickney and Tyler Landfills of 6,388 and 25,249 cubic yards respectively, after applying the waste destination default factors described on page 9 of the TLI Report. However, page 479 of the TLI Report indicates three different values for the total volume of material allegedly sent from the Sinclair Facility to the Stickney Landfill. These three values range from a low of 4,791 cubic yards to a high of 19,185 cubic yards. None of these values are equivalent to the previously described value of 6,388 cubic yards. In a similar fashion, page 475 of the TLI Report indicates four different values for the total volume of the material allegedly sent from the Sinclair facility to the Tyler Landfill. These four values range from a low of 15,767 cubic yards to a high of 47,074 cubic yards and none of the values are equivalent to the previously described value of 25,249 cubic yards. It is not clear how the different values of the total volume of waste material for the two landfills and/or how the volumetric rate of 58.5 cubic yards of material was used in the final allocation formula for Sinclair.

5.2.2 Calculation of Sinclair's Total Adjusted Waste Volume

Each of the three values of the total volume of waste sent from the Sinclair to the Stickney landfill is adjusted on page 479 to arrive at the total adjusted volume of material sent to the landfill. In accordance with page 4 of the TLI report, one would expect that these adjustments would involve multiplication of the total volume by the appropriate waste category adjustment factor and the appropriate generator transported adjustment factor. Once the appropriate factors have been selected it would seem that their values would remain fixed. However, it appears that each of the three values representing the total volume of material sent from Sinclair to the Tyler landfill was adjusted using different adjustment factors. In a similar fashion, each of the four values of the total volume of waste sent from the Sinclair to the Tyler landfill is adjusted on page 475 to arrive at the total adjusted volume of material sent to the landfill. Each of these four values representing were adjusted using different adjustment factors.

5.2.3 Changing Data Values

Page 479 of the Allocator's Report indicates three different values for the percentage of Sinclair's contribution to the total adjusted volume located in the Stickney landfill. These numbers range from a low of 0.83094 % to a high of 0.98614%. However, Page 483 of the TLI Report indicates that the percentage of the total adjusted volume assigned to Sinclair for the Tyler landfill is 1.122.

In a similar fashion, Page 475 of the TLI Report indicates four different values for the percentage of Sinclair's contribution to the total adjusted volume located in the Tyler landfill. The four numbers representing Sinclair's percentage of the total adjusted volume in the Tyler landfill



range from a low of 1.21365% to a high of 1.56468%. However, Page 487 indicates that the percentage of the total adjusted volume assigned to Sinclair for the Tyler landfill is 1.792%.

5.2.4 Numerous Updated Spreadsheets

Pages 28 through 35 of the TLI Report contain spreadsheets pertaining to the volume of waste taken to the Stickney and Tyler Landfills. These spreadsheets are similar to the spreadsheets contained on pages 475 through 482, with the exception of occasional changes in certain numbers. It is unclear which spreadsheets is the final version. This same problem occurs with the tiering analysis spreadsheet found on pages 37 through 55 and again on pages 483 through 490.

A document provided to EPM dated August 1997, which is ten months after the date of TLI Report, provides evidence that the tiering analysis spreadsheets contained on pages 475 through 482 may be the final version of these spreadsheets. This is because the allocation percentages displayed on the August 1997 document match those found on pages 475 and 479 of the TLI Report. On the other hand, the allocation percentages do not match those found on pages 38 and 41 of the TLI Report.

5.2.5 Incorrect Tier Assignment

Tables provided on page 21 of the TLI Report indicate the tier category that a particular facility will be placed based on its volumetric percentage contribution. In accordance with the table for the Tyler Landfill, Sinclair's percent volume 1.792 found on page 487 of the TLI Report should be placed in Tier Category 3. However, as indicated on this page, it has been placed in Tier Category 2. As will be discussed in Section 5.3.4, the placement of a facility within a particular tier category has a significant impact on the final allocation percentage.

5.3 Determining Cost Allocation Algorithm

In developing any systems model, one must identify the various parameters that influence the output parameter(s) of interest and relate them via a mathematical equation (or in many cases a series of mathematical equations). Therefore, EPM's goal at this stage in the modeling process was to develop a series of equations that represented, as accurately as possible, the allocation methodology as presented in the TLI Report and the Montgomery Letter. Once this series of equations were determined, they were input into a computer spreadsheet for deterministic calculation. Having developed the deterministic spreadsheet, uncertain input variables are then fitted with theoretical probability distributions in preparation for the Monte Carlo Simulation.

Assigning variable names to each of the input parameters began the process. Once this was done equations relating these variables were derived. In this section, we will review the series of equations associated with the Stickney Landfill. Table 1 (next page) provides a partial listing of the various input parameter names, symbols, initial values, and reference locations.



Table 1

Variable Name	Symbol	Units	Initial Value	Reference
Sinclair Weekly Waste Production Volume	Vw	yd ³ /wk	58.5	TLI Rept. P. 197
Weeks Per Year of Waste Production	W	wk/yr	52	Evident as Necessary
Stickney Equivalent Years Deposition Factor	Seqy	yr	2.1	Derived TLI Rept. P. 9, See Equation 3 Below
Waste Category Adjustment Factor	Waf	Dim	0.90	TLI Rept. P. 12. 197
Generator Transporter Adjustment Factor	Gtaf	Dim	0.75	TLI Rept. P. 13, 198
Stickney Landfill Total Adjusted Volume	Stv	yd ³	437,266	TLI Rept. P. 482
Stickney Allocation Adjustment Factor	Saa	Dim	0.6408	Derived TLI Rept. P. 483
Stickney Estimated Clean-Up Costs	Sc	\$	14,500,000	Montgomery Letter P. 2

5.3.1 Total Adjusted Volume, Slta

The equation for the total adjusted volume of waste allegedly sent from Sinclair to the Stickney Landfill (Slta) is presented as Equation 2 below.

$$Slta = Vw \times W \times Seqy \times Waf \times Gtaf \quad Eq.2$$

Plugging in the initial values, as provided in Table 1.0 into this equation yields an adjusted volume of 4,312 cubic yards of waste. This value is one of the three values of the adjusted waste volumes calculated for Sinclair as presented on Page 479 of the TLI Report; the other two values being 4,254 and 3,633.

5.3.2 Equivalent Years Deposition Factor, Seqy

Table 1 indicates that the value for Stickney equivalent years deposition factor (Seqy) was derived based on the landfill deposition factors provided on page 9 of the TLI Report. This table divides the relevant time period (1950 - 1968) into six ranges having durations of 6, 2, 3, 3, 2, and 3 years respectively. Associated with each of these range periods are default factors representing, on a relative basis, the portion of each contributor's waste that might have been diverted to a particular landfill. The assigned percentages that correspond to the Stickney landfill



during the time ranges listed above are 0.0, 0.0, 0.2, 0.3, 0.3, and 0.0 respectively. Viewing the time ranges as a row matrix and the default factors as a column matrix, the Seqy can be solved for as follows.

$$Seqy = [6, 2, 3, 2, 3, 3] \times \begin{bmatrix} 0.00 \\ 0.00 \\ 0.20 \\ 0.30 \\ 0.30 \\ 0.00 \end{bmatrix} \quad Eq.3$$

$$= (6 \times 0.00) + (2 \times 0.00) + (3 \times 0.20) + (2 \times 0.30) + (3 \times 0.30) + (3 \times 0.00) \\ = 2.1$$

5.3.3 Percent Volume, Spv

The equation for calculating the percent volume (decimal form) is presented as Equation 4 below.

$$Spv = \frac{Slta}{Stv} = \frac{(Vw \times W \times Seqy \times Waf \times Gtaf)}{Stv} \quad Eq.4$$

Plugging in the initial values as provided in Table 1.1 into the equation yields 0.00986 as the adjusted decimal percent volume for Sinclair's contribution into the Stickney landfill. This number is equivalent to 0.986%. This is one of the three values of the adjusted waste volumes calculated for Sinclair as presented on Page 479 of the TLI Report; the other two values being 0.973 and 0.831. It is also the value provided on page 82, Attachment 1 of the TLI Report.

5.3.4 Allocation Percentage, Sap

Calculation of the allocation percentage calls for applying the tiering methodology described on pages 20 through 23 of the TLI Report. An in depth analysis of the Tiering spreadsheets (Stl15b and Tly15b, pages 483 through 489) yielded an equation for calculating the TLI% for each landfill based on the calculated percent volume and parameters associated with the assigned tier.

Page 21 of the TLI Report provides a table for assigning each of the contributors to a specific Tier based on their calculated adjusted percent volume. The tier categories and percent ranges developed by TLI for the Stickney landfill are presented below in Table 2 (next page).



Table 2
Stickney Tier Allocation Categories

Tier	Volumetric Percent
1A	City of Toledo
1	>4
2	3-4
3	1-3
4	.5-1
5	.1-.5
6	0-.1
7	VND

Each tier has several important parameters associated with it that are involved in the calculation of the TLI % allocation factor. These parameters include:

- The tier sum (Ts);
- The number of parties within the tier (Tn); and,
- The sum of Volumetric Percentages (Vs).

The tier sum is an overall percentage assigned by TLI to each of the defined tiers. The purpose of this number is to represent the percent volume of the tier's overall contribution to the landfill. This number is subjectively assigned by TLI and therefore involves uncertainty. The number of parties that have been placed into a particular tier is a function of their calculated volumetric percentages. The volumetric percentage of 0.986 calculated for Sinclair (static calculation) would fall into Tier 4 as defined by Table 2. The sum of the volumetric percentages is the sum of all calculated volumetric percentages for each of the parties placed in the tier. Note that this value is different from the tier sum value subjectively assigned by TLI.

Once all parties have been assigned to a tier, the TLI general methodology calls for calculation of each party's Pro Rata (Pr) and Per Capita (Pc) Tier distribution components. Equations 5 and 6 respectively present the equations for calculating these components. These equations are presented in terms of solving for Sinclair's components for the Stickney Landfill and therefore contain variable names with the Stickney Landfill. The variable name, Vso, in Equation 5 stands for the sum of all the parties' volumetric percentages within a particular tier, excluding Sinclair.



Lastly, the variable name Tno in Equation 6 represents the number of all other parties within a particular tier, excluding Sinclair.

$$Pr = \frac{Spv}{Spv + Vso} \times Ts \quad Eq. 5$$

$$Pc = \frac{Ts}{1 + Tno} \quad Eq. 6$$

According to the TLI general methodology, 30% of the allocation is based on the pro rata component and 70% of the allocation is based on the per capita component. Therefore, the results from Equations 5 and 6 are multiplied by .30 and .70 and added together. Once this number is obtained, it is multiplied by a percentage assigned to the generator transporter class as a whole. The percentage developed by TLI for the Stickney Landfill is 56.5% (note the percentage for the Tyler Landfill is 60 %). Therefore, the TLI % for Sinclair's contribution to the Stickney Landfill (referred to here by the variable name Sap) is calculated as presented in Equation 7.

$$Sap = [(Pr \times .30) + (Pc \times .70)] \times .565 \quad Eq. 7$$

Plugging Equations 5 and 6 into Equation 7 yields Equation 8.

$$Sap = \left[\left(\frac{Spv}{Spv + Vso} \times Ts \times 0.30 \right) + \left(\frac{Ts}{1 + Tno} \times 0.70 \right) \right] \times 0.565 \quad Eq. 8$$

An analysis of Equation 8 indicates that the tier sum (Ts) associated with each tier is a significant factor. The larger this value is the larger will be the final allocation percentage. Inserting 6.063, 8.00 and 11 for Vso, Ts, and Tno, respectively (see pages 483 and 484 of the TLI report), and 0.986 for Spv (see Section 5.3.3) results in an allocation percentage of 0.453 %. This percentage could be plugged into Equation 1 (as a decimal percent) to determine Sinclair's cost allocation for its contribution to the Stickney Landfill. This is not the final number for the Sap for purposes of this modeling approach since it was developed in a deterministic sense and without the aid of Monte Carlo simulation.

5.4 Spreadsheet Deterministic Model

Once the general allocation methodology was reduced to the set of equations provided in Section 5.3, an electronic spreadsheet was developed with the aid of Microsoft Excel™ to perform the necessary calculations. This deterministic spreadsheet model is presented as Figure 1 (See Appendix A for all Figures). This spreadsheet acted as the template and test model for validation



of the programming of the defined equations. Figure 1 actually appears as two smaller spreadsheets; the larger spreadsheet on the left hand side of the figure contains all of the output values of interest and a number of input parameters common to both landfills. The smaller spreadsheet on the right hand side of the figure contains a lookup table of deposition factors for each landfill. This lookup table is consistent with deposition factors contained on page 9 of the TLI Report.

Note that within this template model each of the cells containing numbers and/or functions have been provided with variable names. These variable names replace the alphanumeric address commonly associated with spreadsheet cells. These variable names were assigned to each cell to facilitate the analysis of the spreadsheet by later reviewers since the various formulas in the spreadsheet refer to a variable name rather than a cells address. The variables names for the cells containing numbers in the larger spreadsheet are visible adjacent and to the left of the cells containing numbers. For example, the variable name for the cell containing the weekly waste production volume of 58.5 is Vw. The column headers Yr, Tdf, Sdf, Ddf, and Odf indicate the variable names for the cells in the smaller lookup table. There is more than one row in each column requiring that the values within each row be different names. This was accomplished by using the column heading in the variable name with the addition of a number at the end of the name to reflect the row. For example, the variable name for the value located in the second row of the column labeled Ddf would be Ddf2.

The arrows from the smaller spreadsheet to the larger indicate that the values for the various landfill equivalent years deposition factors are determined by the year range durations and the year adjusted deposition factors. For example, the Tyler Equivalent year deposition factor is determined by the values contained in first two numerical columns of the smaller spreadsheet by applying Equation 3.

Figure 1 is a deterministic model in that there is one set of input parameters, which result in a fixed number for each output value of interest such as the percent volume, allocation percentage and final cost allocation. Output values are color coded in blue font. The calculated outputs on this spreadsheet are not the final. These values will change upon development and execution of the Monte Carlo Simulation model.

5.5 Spreadsheet Monte Carlo Simulation Model

The spreadsheet Monte Carlo simulation model was developed by replacing each uncertain input parameter in the deterministic model with a theoretical probability distribution function. These theoretical functions were assigned based on EPM's review of the available data set. Figure 2 presents the spreadsheet Monte Carlo simulation model. The uncertain input values are indicated using pink color-coded font. There are a total of ten uncertain input parameters (random variables) that have been replaced by probability distribution functions. A description and justification of the probability distribution assigned to each uncertain parameter is provided in Appendix B. The pink values that appear on the spreadsheet represent the mean of the



assigned probability distribution function. The green color-coded font in the spreadsheet represents intermediate values. These values are dependent upon a random variable and are involved in the calculation of various output values of interest. The black numerical values represent fixed independent numbers that are used in the calculation of output variables. These values do not change during the Monte Carlo simulation. As in the deterministic model, the blue color-coded font represents output values. Finally, it should be noted that the output values presented on Figure 2 are not the final output values of the simulation. These values are the result of a single iteration through the modeling process.

5.5.1 Categories of Uncertain Input Parameters

Seven of ten input parameters replaced by probability distribution functions are related to year adjusted deposition factors for the Dura and other landfills. This has the general effect of increasing the equivalent number of years that material was taken to the Dura landfill and other landfills while decreasing the equivalent number of years that material was taken to the Stickney and Tyler landfills. This was done to reflect the significant amount of information that indicated that Sinclair delivered its wastes to locations other than the Stickney and Tyler landfills. A detailed justification for this is provided in Appendix B. Two of the remaining factors pertain to the volumetric production of waste and the final one pertains to the waste category adjustment factor.

5.5.2 Output Parameters of Interest

Prior to performing the Monte Carlo simulation, a number of parameters can be identified to the computer as output parameters of interest. During the simulation, the computer will store in a database the results of each iteration for each output parameter of interest. The stored data may be used to prepare probability distributions and descriptive statistics for any parameter so designated. All of the blue color-coded parameters in Figure 2 were designated as output parameters of interest. Although a number of parameters have been designated as output parameters, the most significant parameters for the purposes of this analysis include:

- The total adjusted volume of waste material sent from Sinclair to the Stickney and Tyler Landfills ($Stla$, $Ttla$); and
- The Stickney and Tyler Allocation Percentages (Sap , Tap ; formerly the TLI %).

The total adjusted volume of waste material sent to each landfill is significant for in addition to being the purpose of the modeling effort as stated in the introduction of this report, it is the parameter which establishes the percent volume contribution to each landfill (see Equation 4). The percent volume contribution determines the tier category and ultimately the allocation percentage as per Equation 8.

The equation for determining the total adjusted volume of waste material, Equation 2, accounts all of the uncertain input parameters discussed in section 5.5.1. Therefore, once this value is



known, the tier category, allocation percentage and cost allocation is determined (no further uncertainty involved). As the simulation proceeds and new values of the adjusted volume of waste material are calculated, the model must be able to recognize when it has entered a new tier category and calculate the allocation percentage associated with that category. This was accomplished with aid of a number of spreadsheet conditional IF Functions and a tier category look up table provided as Figure 3. At the completion of each iteration, the model assigns the appropriate tier category for each landfill based on calculated percent volumes. Once the tier category is assigned, the model uses parameters contained within the look up table (T_s , V_{so} , T_n) along with Equation 8 to calculate the proper allocation percentage.

5.6 Simulation Procedure

The simulation used for this model involved a total of 15,000 iterations. During the simulation, convergence monitoring was used to measure the stability of the output distributions. The simulation monitored for convergence after every 500 iterations. The monitoring was performed by measuring the changes in the mean, standard deviation, and percentile values at the completion of each series of 500 iterations. Simulations are commonly terminated when changes of less than 1.5 % for all of the measured values are achieved. This model achieved convergence (less than 1.5 % change in measured values) after approximately 3,500 iterations. However, the simulation was permitted to continue until all 15,000 simulations had been completed at which point convergence of less than 0.01% had been achieved for nearly all output parameters of interest.



6.0 RESULTS & CONCLUSIONS

This section of the report will focus on the results obtained for the volume of material delivered to each landfill (Stla, Ttla) and their associated allocation percentages (Sap, Tap).

6.1 Output Results Presentation

The results for each of the significant output parameters of interest are presented in there different forms including the:

- Output Probability Distribution;
- Cumulative Probability Distribution; and,
- Descriptive Statistics.

6.1.1 Output Probability Distribution

The output probability distribution graph is presented in the form of a bar chart known as a histogram. The horizontal axis of the graph is divided into a number of equally spaced ranges often referred to as bins. The number indicated beneath each bin represents the midpoint of each bin's range. Vertical bars equal to the width of each of the bins extend in proportion to the number of times the output parameter of interest had a value falling within each bins range during the simulation. In other words, the height of a vertical bar associated with a particular bin indicates the percentage of output results that fell with this bin's range. This simulation for this project was run for a total of 15,000 iterations., therefore, a bin having a vertical bar extending upwards to 10 % would indicate that 1,500 of the calculated values for the parameter of interest fell within the range of this bin.

6.1.2 Cumulative Probability Distribution

The data contained within the probability distribution is used to generate the cumulative probability distribution curve. The values of the horizontal axis of this curve are the same as those with used with its associated probability distribution. The probabilities on there vertical axis however increase from 0 % to 100 %. A line is plotted on this graph which indicates the likelihood that the parameter of interest will be less than or equal to a corresponding value on the horizontal axis.



6.1.3 Descriptive Statistics

The following descriptive statistics are provided for each of the significant output parameters of interest.

- Minimum
- Maximum
- Mean
- Standard Deviation
- Mode
- Probability Percentiles

The minimum value is the smallest value calculated for a particular parameter for all 15,000 iterations of the simulation. The maximum value represents the maximum of all 15,000 iterations.

The mean is the result of primary interest when performing a Monte Carlo simulation. The mean or **expected value (EV)** is defined as the probability weighted average of all output values. It is important to note that EV is a probability weighted average. It is calculated by weighting the values in accordance with their probability of occurring. Statisticians often refer to it as an **unbiased estimator**, i.e., it is the number that best represents the output probability distribution from which it was determined. If a single number is sought to represent a particular parameter, the EV is the recommended value. The EV is indicated on the probability distribution histogram and the cumulative probability distribution curves for each of the significant output parameters of interest.

The standard deviation provides a measure of the dispersion of the output data about the mean. The majority of the data falls within one standard deviation about the mean.

Lastly, the mode is the value that occurs more frequently than all other values. When looking at the probability distribution histogram, the mode will fall within the range of the tallest vertical bar. The mode should not be confused with the EV. The mode occurs most often whereas the EV is the probability weighted average of all values.

The probability percentiles, in essence, provide the data for plotting the cumulative probability distribution curve. For example, the 95 % percentile indicates that 95 % of the simulation results are less than or equal to this value. Conversely, there is less than 5 % chance that the 95 % percentile value will be exceeded. Percentile values have been provided ranging for 5 % to 95 % for all significant output parameters of interest.

6.2 Adjusted Volume of Material Results, Stickney and Tyler Landfills (Stla, Ttla)



The probability distribution, cumulative probability distribution curve and the descriptive statistics for the adjusted volume of material sent to the Stickney Landfill (Slta) are presented in Figures 4, 5, and 6 respectively. This same information for the Tyler landfill is provided in Figures 7, 8, and 9.

The probability distribution for the adjusted volume of material to the Stickney Landfill is skewed such that the bulk of the outcome values are in the lower end of the range. The EV is 1,562 cubic yards. The minimum value is 223 cubic and the maximum value is 4,795 cubic yards. As discussed in Section 5.2.3, the table on page 479 of the TLI Report contained three different values for the adjusted volume of material taken from the Sinclair to the Stickney Landfill including 3,633, 4254, and 4312 cubic yards of material. The expected value from the Monte Carlo simulation model is less than one-half the lowest value contained in the TLI Report. The 95 % percentile for the Slta is 2,835 cubic yards, i.e., 95 % of the calculated outcomes are below this value and there is only a 5 % probability that its actual value exceeds this amount. Therefore, given the uncertainty in the input parameters, the TLI Report overestimates this value.

Similar to the Stickney Landfill results, the probability distribution for the adjusted volume of material to the Tyler Landfill is skewed such that the bulk of the outcome values are in the lower end of the range. The EV is 6,461 cubic yards. The minimum value is 929 cubic and the maximum value is 19,176 cubic yards. As discussed in Section 5.2.2, the table on page 479 of the TLI Report contained four different values for the adjusted volume of material taken from Sinclair to the Stickney Landfill including 15,767, 18,729, 19,455, and 20,328 cubic yards of material. The expected value from the Monte Carlo simulation model is approximately two-fifths of the lowest value contained in the TLI Report. The 95 % percentile for the Ttla is 11,663 cubic yards, i.e., 95 % of the calculated outcomes are below this value and there is only a 5 % probability that its actual value exceeds this amount. Given the uncertainty in the input parameters, the TLI Report appears to highly overestimate this value. This is particularly true with respect to Sinclair's link to the Tyler Landfill because only one of the witnesses identified in the TLI Report indicated that Sinclair's wastes "might have went to Tyler" (Witness EPA 1995-4).

6.3 Allocation Percentages Stickney and Tyler Landfills (Sap, Tap)

The probability distribution, cumulative probability distribution curve and the descriptive statistics for the allocation percentage for Sinclair's contribution to the Stickney Landfill (Sap) are presented in Figures 10, 11, and 12 respectively. This same information for the Tyler landfill (Tap) is provided in Figures 13, 14, and 15.

6.3.1 Stickney Landfill

The probability distribution for the adjusted volume of material to the Stickney Landfill is skewed such that the bulk of the outcome values are in the lower end of the range. In addition, the probability distribution indicates two distinct areas where the output results appear to be



grouped together, i.e., about the 0.242 histogram bar and the 0.378 histogram bar. These groupings represent changes in the tier category as a function of the calculated adjusted volume of material of waste material sent to the landfill. The grouping about the 0.242-histogram bar is related to the Tier Category 5. The grouping about the 0.378-histogram bar is related to the Tier Category 4. Note at no time during the simulation did the model assign a result to tier category 3 as assigned on page 483 of the TLI report.

The EV for the Sinclair Stickney allocation percentage (Sap) is **0.272 %**. This is ~~just~~ approximately two-fifths of the value allocation percentage assigned by TLI of 0.719 %. The minimum value calculated for the Sap is 0.161 % and the maximum value is 0.703 %. Given the uncertainty in the input parameters, the TLI Report appears to highly overestimate the allocation percentage that should be assigned to Sinclair for its contribution to the landfill assuming that the evidence linking Sinclair to Stickney is otherwise compelling and reliable. As discussed in Section 6.1.3 the EV is the best unbiased estimator and, therefore, represents the best choice of the allocation percentage given the uncertainty associated with the various input parameters. Using the EV of 0.272 and Equation 1, Sinclair's cost allocation for its contribution to the Stickney landfill is calculated as **\$98,600**. This value is \$162,037 less than the \$260,637 cost allocation that would be imposed if TLI's percent allocation of 0.719 were accepted

6.3.2 Tyler Landfill

Similar to the probability distribution for the adjusted volume of material to the Stickney Landfill, the probability distribution for the Tyler Landfill allocation percentage is skewed such that the bulk of the outcome values are in the lower end of the range. The Tyler allocation percentage probability distribution also indicates two distinct areas where the output result appear to be grouped together, i.e., about the 0.266 histogram bar and the 0.560 histogram bar. These groupings represent changing in the tier category as a function of the calculated adjusted volume of material of waste material sent to the landfill. The grouping about the 0.266 histogram bar is related to the tier five category. The grouping about the 0.560 histogram bar is related to the tier category 4. Note at no time during the simulation did the model assign a result to tier category 2. As discussed in Section 5.2.5, TLI assigned Sinclair to tier category 2 for reasons that could not identified.

The EV for the Sinclair Stickney allocation percentage (Sap) is **0.279 %**. This is ~~just~~ approximately one-third of the value for allocation percentage assigned by TLI of 0.984 %. The minimum value calculated for the Sap is 0.106 % and the maximum value is 0.640 %. Therefore, given the uncertainty in the input parameters, the TLI Report appears to highly overestimate this allocation percentage that should be assigned to Sinclair for its contribution to the Tyler Landfill assuming that the evidence linking Sinclair to Tyler is otherwise compelling and reliable. Using the EV of 0.279 and Equation 1, Sinclair's cost allocation for its contribution to the Tyler landfill is calculated as **\$80,213**. This value is \$202,687 less than the \$282,900 cost allocation that would be imposed if TLI's percent allocation of 0.984 % were accepted.

6.4 Sensitivity Analysis



The purpose of a sensitivity analysis is to determine the key uncertain input variables that are driving the results of the model for the particular output parameter of interest. The Sinclair allocation percentages associated with the Stickney and Tyler Landfills are the most significant output parameter since these parameters determine the cost allocation. Upon completion of the Monte Carlo simulation, EPM performed a sensitivity analysis on these two parameters. The results of the sensitivity analysis for the Stickney and Tyler landfills are presented in Figures 16 and 17 respectively. The data in Figures 16 and 17 are presented in the form of a tornado diagram. In this diagram, each of the significant input parameters is represented as a horizontal bar. The bar length represents the degree of correlation between the input parameter and the output parameter, the longer the bar the larger the correlation (i.e. the greater the effect of the input parameter on the output). Correction factors take on a value between -1 and 1. A positive correlation factor indicates that as the input parameter gets larger, the output parameter gets larger. A negative correlation indicates an inverse relationship, i.e., as the input parameter gets larger the output parameter gets smaller. Input parameters having an absolute value correlation of less than 0.05 are considered, in most cases, insignificant. The parameters having the greatest impact are placed near the top of the diagram, hence the characteristic tornado shape.

Figure 16 indicates that waste adjustment factor (Waf), the weekly waste production volume (Vw) and the 1963 - 1965 year adjusted deposition factor for the Dura landfill have the most significant impact on the Stickney Landfill allocation percentage.

Figure 17 indicates that waste adjustment factor (Waf), the weekly waste production volume (Vw) and the 1950 - 1955 year adjusted deposition factor for the other landfills have the most significant impact on the Tyler Landfill allocation percentage.



Appendix A

Figures

Dial Stickney/Tyler Cost Allocation Probabilistic Modeling Results



	Variable	Value	Units
Dial Weekly Waste Production Volume	Vw	58.50	yd3/wk
Weeks Per Year	W	52	wk/yr
Cubic Yards Per Year	Va	3,042	yd3/yr
Relevant Time Period	Tr	19.00	yr
Total Waste Produced by Sinclair During Time Period	Tw	57,798	yd3
Sinclair Waste Category Adjustment Factor	Waf	0.9	Dim
Sinclair Generator Transporter Adjustment Factor	Gtaf	0.75	Dim
Tyler Landfill Total Volume	Tt	1,299,193	yd3
Tyler Estimated Cleanup Costs	Tc	11,500,000	\$
Stickney Landfill Total Volume	Stv	437,227	yd3
Stickney Estimated Cleanup Costs	Sc	14,500,000	\$
Fixed Allocation Multiplier	Fam	2.5	Dim
Tyler Equivalent Years Deposition Factor	Tegy	8.30	yr
Total Waste Sent from Sinclair to Tyler Landfill	Tlt	25,249	yd3
Adjusted Waste Sent from Sinclair to Tyler Landfill	Tlta	17,043	yd3
Tyler Percent Volume	Tpv	1.3118	%
Tyler Tier Assignment	Tier T	3	Dim
Tyler Allocation Percentage	Tap	0.6122	%
Sinclair Tyler Cost Allocation	Sta	176,000	\$
Stickney Equivalent Years Deposition Factor	Seqy	2.10	yr
Total Waste Sent from Sinclair to Stikney Landfill	Tst	6,388	yd3
Adjusted Waste Volume Sent from Sinclair to Stikney	Stta	4,312	yd3
Stickney Percent Volume	Spv	0.9862	%
Stickney Tier Assignment	Tier S	4.0000	Dim
Stikney Allocation Percentage	Sap	0.4534	%
Sinclair Stickney Cost Allocation	Ssa	164,350	\$
Dura Equivalent Years Deposition Factor	Deqy	5.50	yr
Total Waste Sent from Sinclair to Dura Landfill	Tdt	16,731	yd3
Other Landfills Equivalent Years Deposition Factor	Oeqy	3.10	yr
Total Waste Sent from Sinclair to Other Landfills	Tot	9,430	yd3

	Range Duration, yrs	Tyler Year Adjusted Deposition Factor, %	Stickney Year Adjusted Deposition Factor, %	Dura Year Adjusted Deposition Factor, %	Other Year Adjusted Deposition Factor, %
Year Range	Yr	Tdf	Sdf	Ddf	Odf
1950 - 1955	6	0.80	0.00	0.00	0.20
1956 - 1957	2	0.70	0.00	0.20	0.10
1958 - 1960	3	0.50	0.20	0.20	0.10
1961 - 1962	2	0.30	0.30	0.30	0.10
1963 - 1965	3	0.00	0.30	0.60	0.10
1966 - 1968	3	0.00	0.00	0.70	0.30
Total Years	19				

Figure 1
Spreadsheet Deterministic Model
Dial Stickney/Tyler Cost Allocation

	Variable	Value	Units
Dial Weekly Waste Production Volume	Vw	54.60	yd3/wk
Weeks Per Year	W	50	wk/yr
Cubic Yards Per Year	Va	2,725	yd3/yr
Relevant Time Period	Tr	19.00	yr
Total Waste Produced by Sinclair During Time Period	Tw	51,779	yd3
Sinclair Waste Category Adjustment Factor	Waf	0.6	Dim
Sinclair Generator Transporter Adjustment Factor	Gtaf	0.76	Dim
Tyler Landfill Total Volume	Tt	1,299,193	yd3
Tyler Estimated Cleanup Costs	Tc	11,500,000	\$
Stickney Landfill Total Volume	Stv	437,227	yd3
Stickney Estimated Cleanup Costs	Sc	14,500,000	\$
Fixed Allocation Multiplier	Fam	2.5	Dim
Tyler Equivalent Years Deposition Factor	Tegy	5.06	yr
Total Waste Sent from Sinclair to Tyler Landfill	Tlt	13,797	yd3
Adjusted Waste Sent from Sinclair to Tyler Landfill	Tlta	6,209	yd3
Tyler Percent Volume	Tpv	0.4779	%
Tyler Tier Assignment	Tier T	5	Dim
Tyler Allocation Percentage	Tap	0.2870	%
Sinclair Tyler Cost Allocation	Sta	82,512	\$
Stickney Equivalent Years Deposition Factor	Segy	1.22	yr
Total Waste Sent from Sinclair to Stickney Landfill	Tst	3,333	yd3
Adjusted Waste Volume Sent from Sinclair to Stickney	Ssta	1,500	yd3
Stickney Percent Volume	Spv	0.3430	%
Stickney Tier Assignment	Tier S	5.0000	Dim
Stickney Allocation Percentage	Sap	0.2591	%
Sinclair Stickney Cost Allocation	Ssa	93,922	\$
Dura Equivalent Years Deposition Factor	Deqy	9.60	yr
Total Waste Sent from Sinclair to Dura Landfill	Tdt	26,153	yd3
Other Landfills Equivalent Years Deposition Factor	Oeqy	3.12	yr
Total Waste Sent from Sinclair to Other Landfills	Tot	8,496	yd3

	Range Duration, yrs	Tyler Year Adjusted Deposition Factor, %	Stickney Year Adjusted Deposition Factor, %	Dura Year Adjusted Deposition Factor, %	Other Year Adjusted Deposition Factor, %
Year Range	Yr	Tdf	Sdf	Ddf	Odf
1950 - 1955	6	0.52	0.00	0.24	0.24
1956 - 1957	2	0.40	0.00	0.48	0.12
1958 - 1960	3	0.26	0.11	0.66	0.09
1961 - 1962	2	0.17	0.27	0.60	0.06
1963 - 1965	3	0.00	0.19	0.76	0.06
1966 - 1968	3	0.00	0.00	0.70	0.30
Total Years	19				

Figure 2
Spreadsheet Monte Carlo Simulation Model
Dial Stickney/Tyler Cost Allocation

Tyler	Tier 6	Tier 5	Tier 4	Tier 3	Tier 2
Tier Upper Bound Volumetric Percent	0.1	0.5	1	3	4
Tier Sum %	2.00	2.00	6.50	13.00	22.50
Sum of Volumetric Percentages	0.328	0.28	4.881	11.057	26.424
Number of Parties in Tier Including Sinclair	20	14	18	15	13
TLI % if Placed in this Tier	0.255477	0.286997	0.256001	0.460944	0.798866

Stickney	Tier 6	Tier 5	Tier 4	Tier 3	Tier 2
Tier Upper Bound Volumetric Percent	0.1	0.5	1	3	4
Tier Sum %	3.00	7.00	8.00	18.50	7.75
Sum of Volumetric Percentages	0.397	3.886	6.063	21.432	9.883
Number of Parties in Tier Including Sinclair	13	17	12	13	13
TLI % if Placed in this Tier	0.326978	0.259095	0.336279	0.612226	0.279845

Figure 3
Tier Category Look Up Table
Dial Stickney/Tyler Cost Allocation

Prepared by:
Environmental Project Management, Inc.

Adjusted Volume of Material Sent from Sinclair to Stickney Landfill

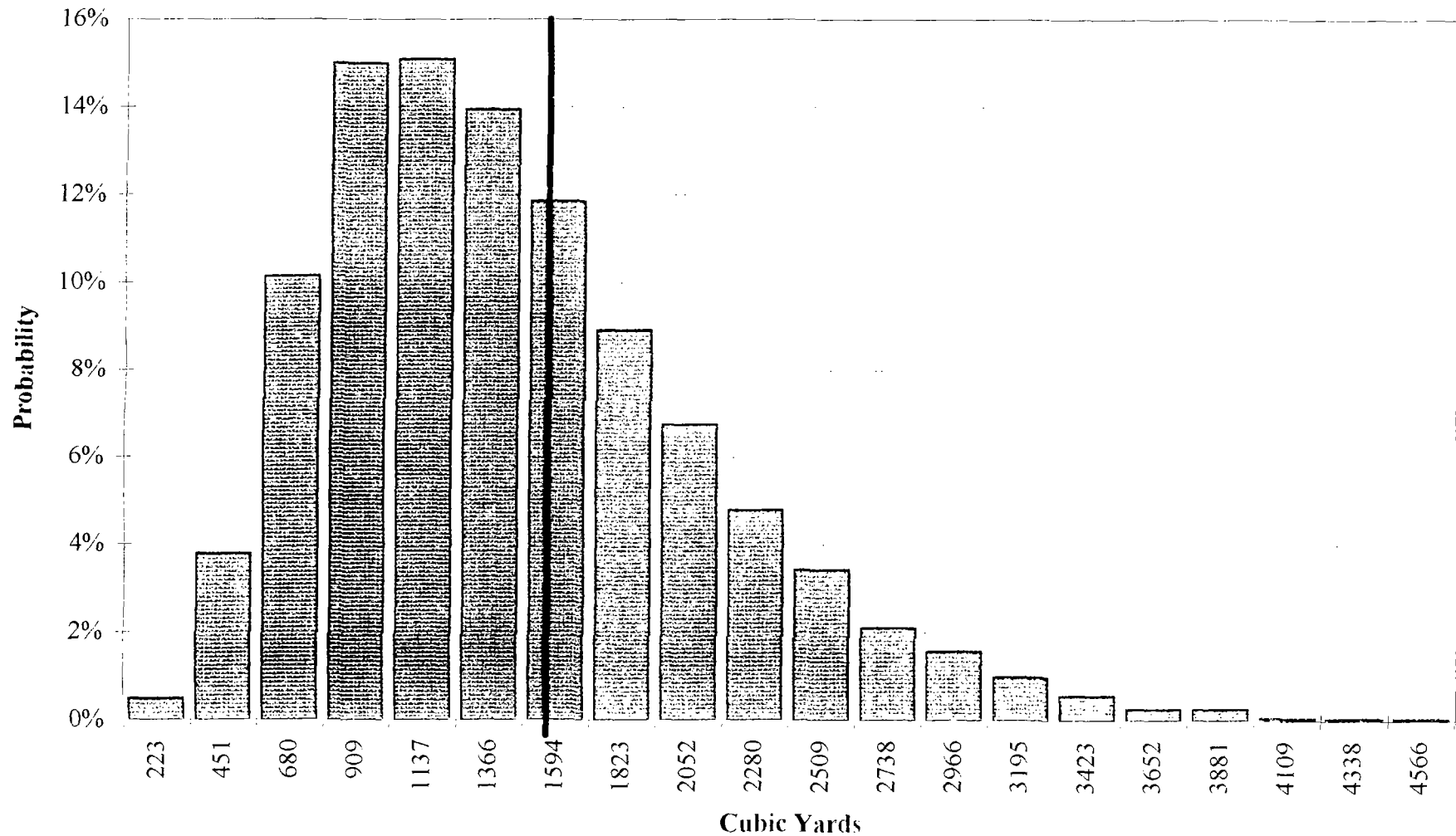


Figure 4
 Probability Distribution
 Adjusted Volume of Material Stickney Landfill
 Sinclair Manufacturing Company

EV = 1562

Prepared by :
 Environmental Project Management, Inc.

Adjusted Volume of Material Sent from Sinclair to Stickney Landfill

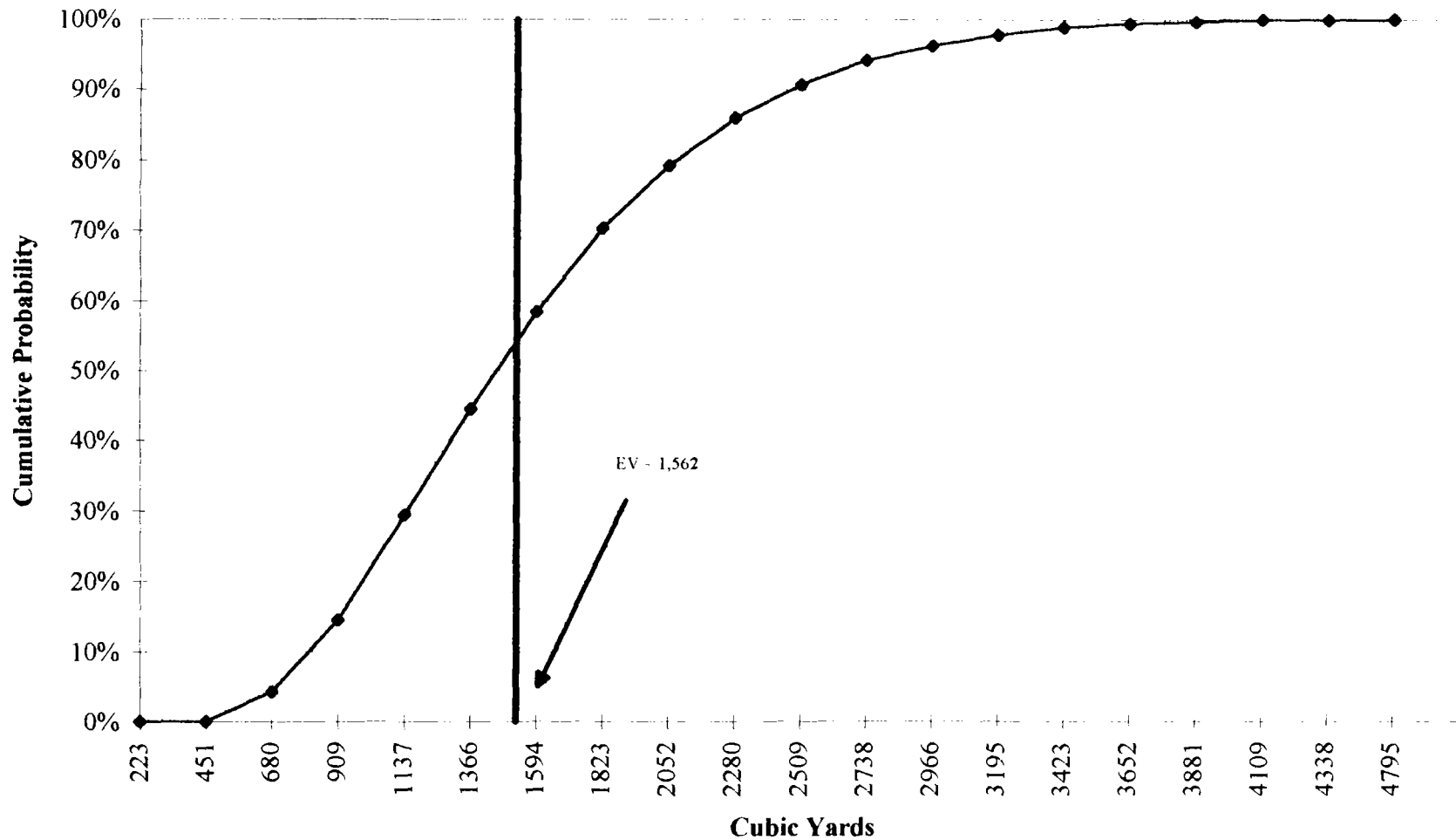


Figure 5
 Cumulative Probability Distribution
 Adjusted Volume of Material Stickney Landfill
 Sinclair Manufacturing Company

Prepared by:
 Environmental Project Management, Inc.

Name	Stickney Adjusted Material Volume Slta, Yd³
Minimum =	223
Maximum =	4,795
Mean =	1,563
Std Deviation =	656
Mode =	1,099
5% Perc =	703
10% Perc =	826
15% Perc =	919
20% Perc =	996
25% Perc =	1,074
30% Perc =	1,145
35% Perc =	1,223
40% Perc =	1,297
45% Perc =	1,373
50% Perc =	1,450
55% Perc =	1,532
60% Perc =	1,622
65% Perc =	1,715
70% Perc =	1,817
75% Perc =	1,932
80% Perc =	2,073
85% Perc =	2,243
90% Perc =	2,467
95% Perc =	2,835

Figure 6
Adjusted Volume Waste Output Descriptive Statistics
Stickney Landfill

Prepared by:
Environmental Project Management, Inc.

Adjusted Volume of Material Sent form Sinclair to Tyler Landfill

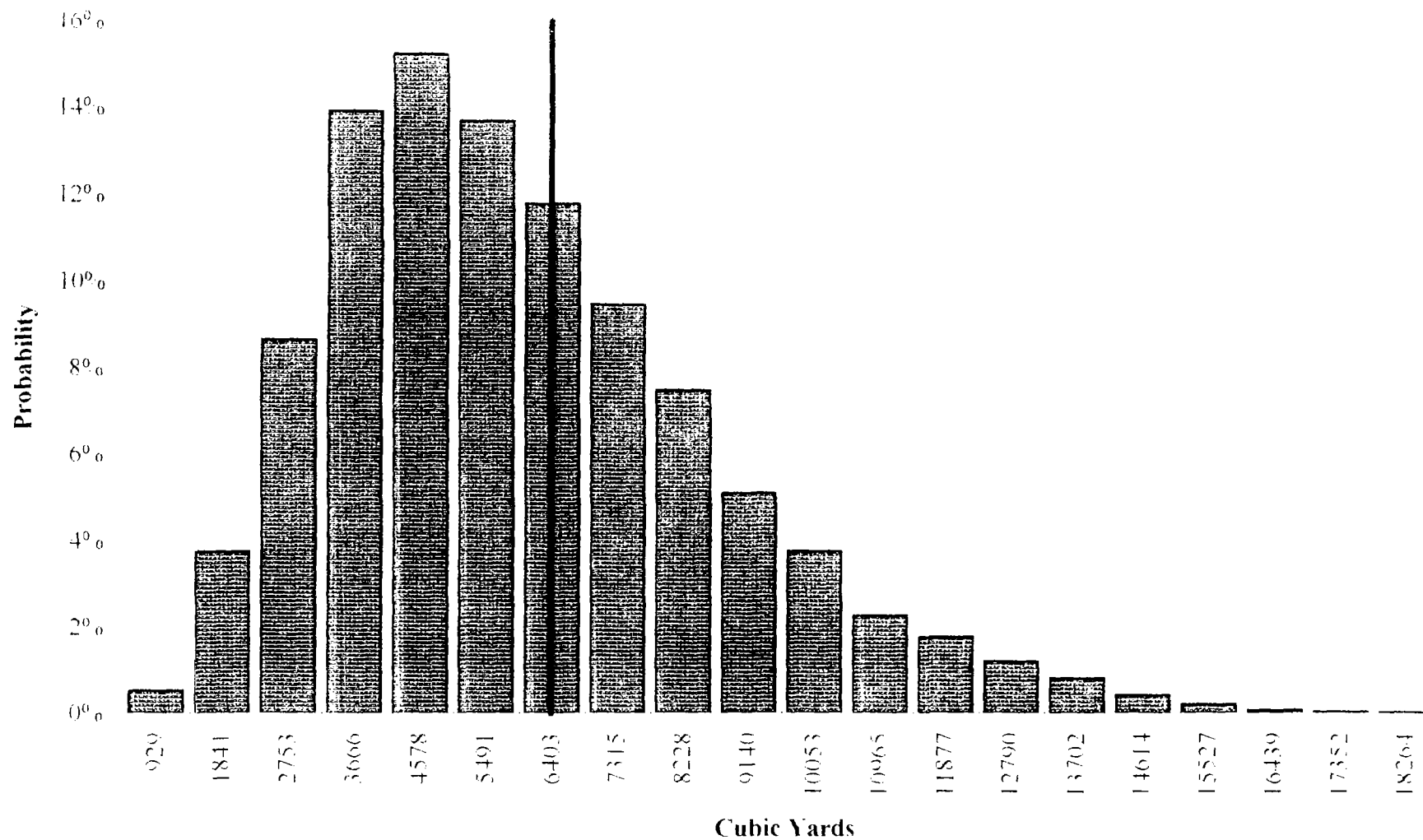


Figure 7
Probability Distribution
Adjusted Volume of Material Tyler Landfill
Sinclair Manufacturing Company

Prepared by
Environmental Project Management, Inc

Adjusted Volume of Material Sent from Sinclair to Tyler Landfill

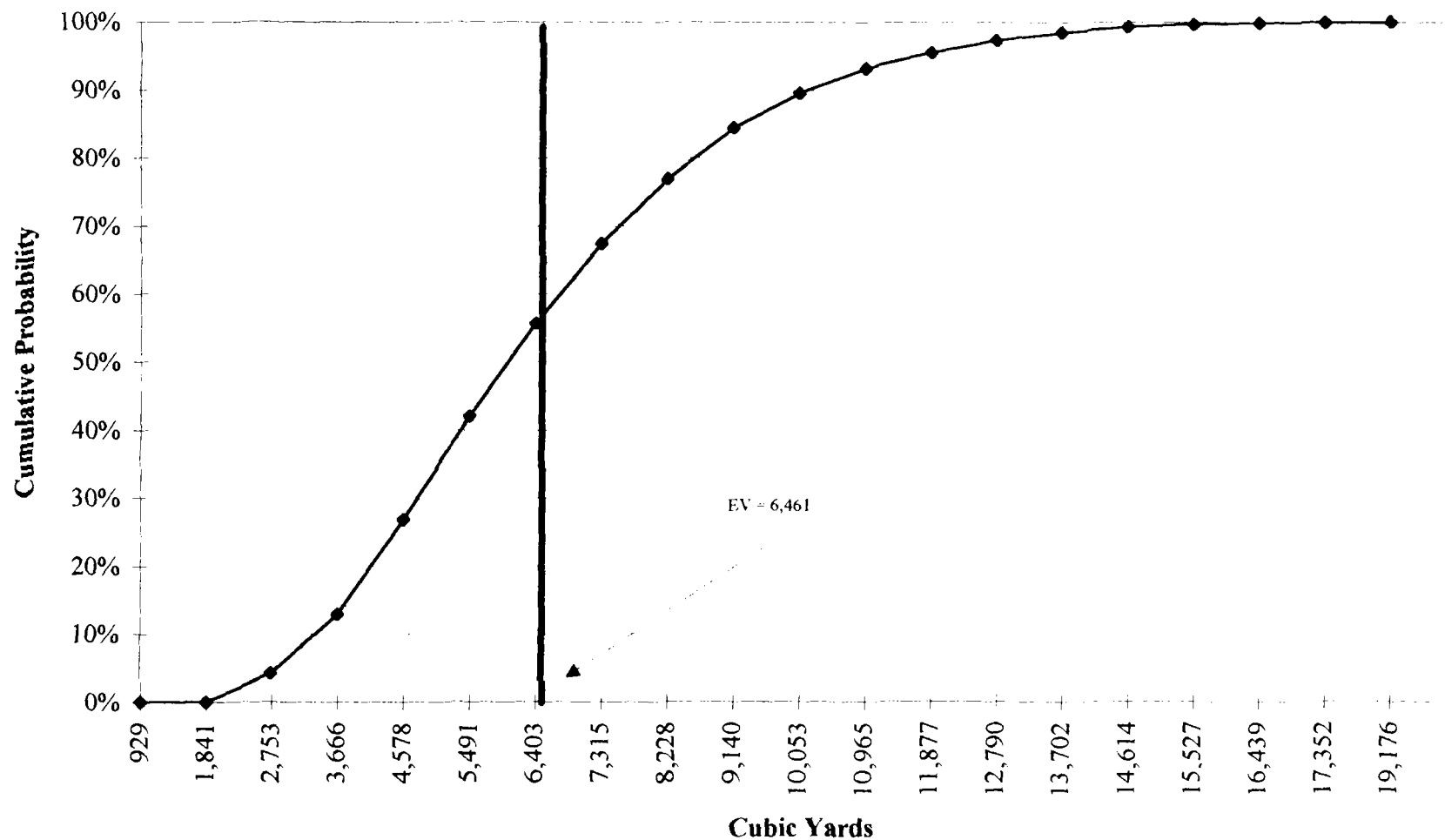


Figure 8
Cumulative Probability Distribution
Adjusted Volume of Material Tyler Landfill
Sinclair Manufacturin Company

Prepared by:
Environmental Project Mangment, Inc.

Name	Tyler Adjusted Material Volume Ttla, Yd³
Minimum =	929
Maximum =	19,176
Mean =	6,462
Std Deviation =	2,684
Mode =	3,028
5% Perc =	2,867
10% Perc =	3,417
15% Perc =	3,815
20% Perc =	4,154
25% Perc =	4,470
30% Perc =	4,783
35% Perc =	5,082
40% Perc =	5,366
45% Perc =	5,679
50% Perc =	5,995
55% Perc =	6,358
60% Perc =	6,726
65% Perc =	7,125
70% Perc =	7,541
75% Perc =	8,024
80% Perc =	8,569
85% Perc =	9,240
90% Perc =	10,165
95% Perc =	11,663

Figure 9
Adjusted Volume Waste
Output Descriptive Statistics
Tyler Landfill

Prepared By:
Environmental Project Management, Inc.

Distribution for Stickney Allocation Percentage

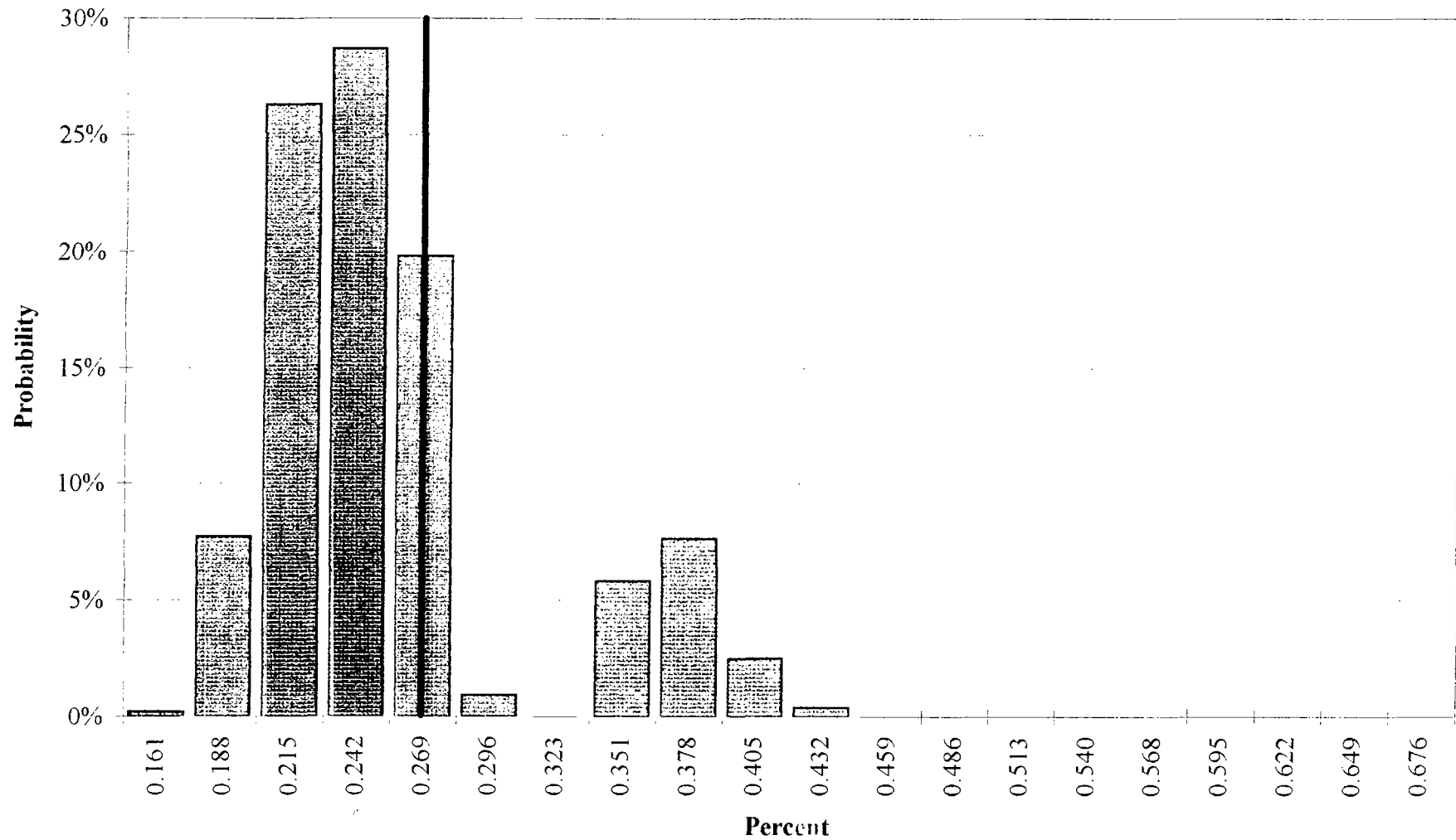


Figure 10
Probability Distribution
Stickney Allocation Percentage
Sinclair Manufacturing Company

EV = .272

Prepared By:
Environmental Project Management, Inc.

Distribution for Stickney Allocation Percentage

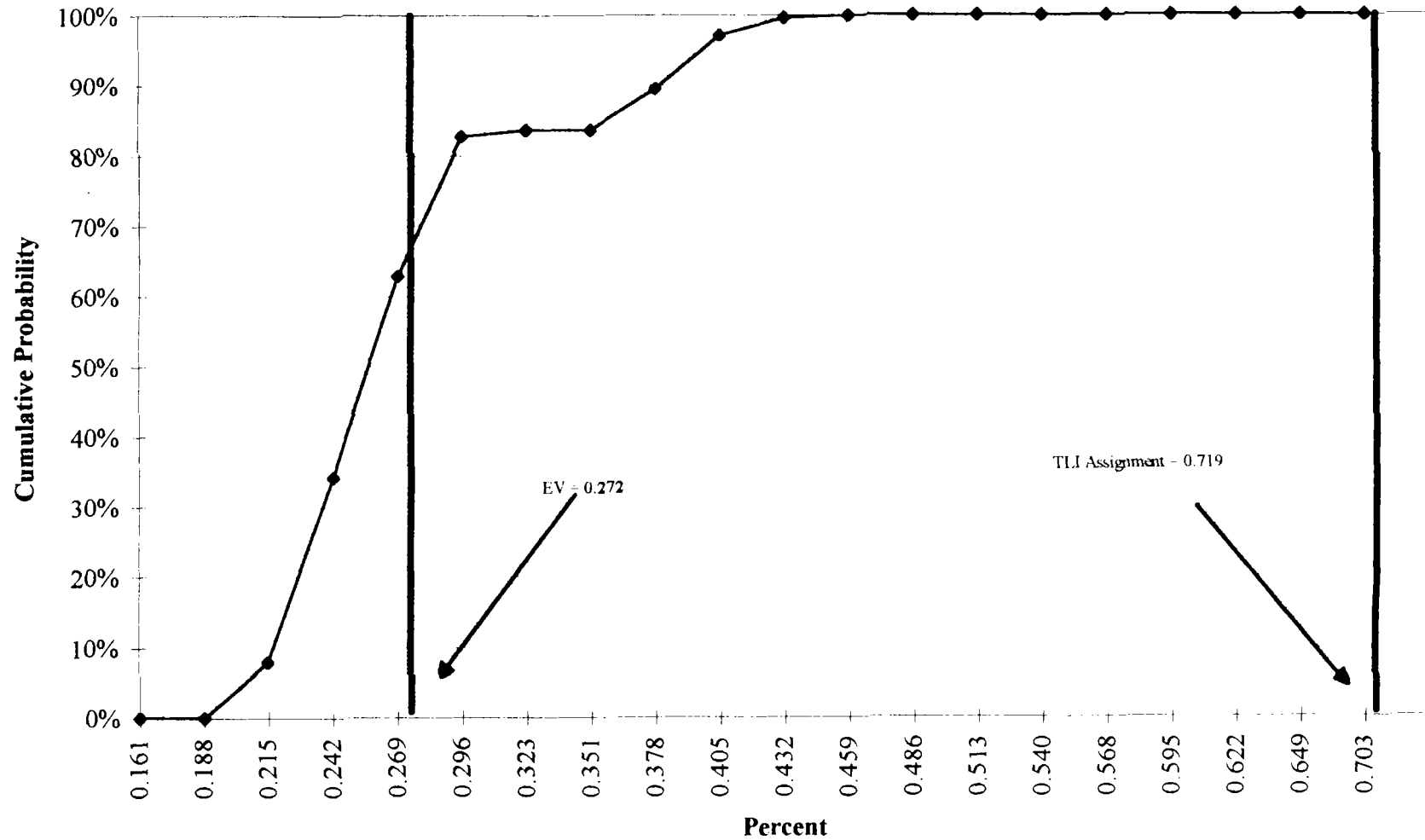


Figure 11
Cumulative Probability Distribution
Stickney Allocation Percentage
Sinclair Manufacturing Company

Prepared by:
Environmental Project Management, Inc.

Name	Stickney Allocation Percentage, Sap
Minimum =	0.161
Maximum =	0.703
Mean =	0.272
Std Deviation =	0.0570
Mode =	0.208
5% Perc =	0.210
10% Perc =	0.218
15% Perc =	0.224
20% Perc =	0.229
25% Perc =	0.234
30% Perc =	0.238
35% Perc =	0.243
40% Perc =	0.247
45% Perc =	0.252
50% Perc =	0.256
55% Perc =	0.261
60% Perc =	0.266
65% Perc =	0.271
70% Perc =	0.277
75% Perc =	0.283
80% Perc =	0.291
85% Perc =	0.369
90% Perc =	0.379
95% Perc =	0.394

Figure 12
Stickney Allocation Percentage
Output Descriptive Statistics

Prepared By:
Environmental Project Mangement, Inc.

Distribution for Tyler Allocation Percentage

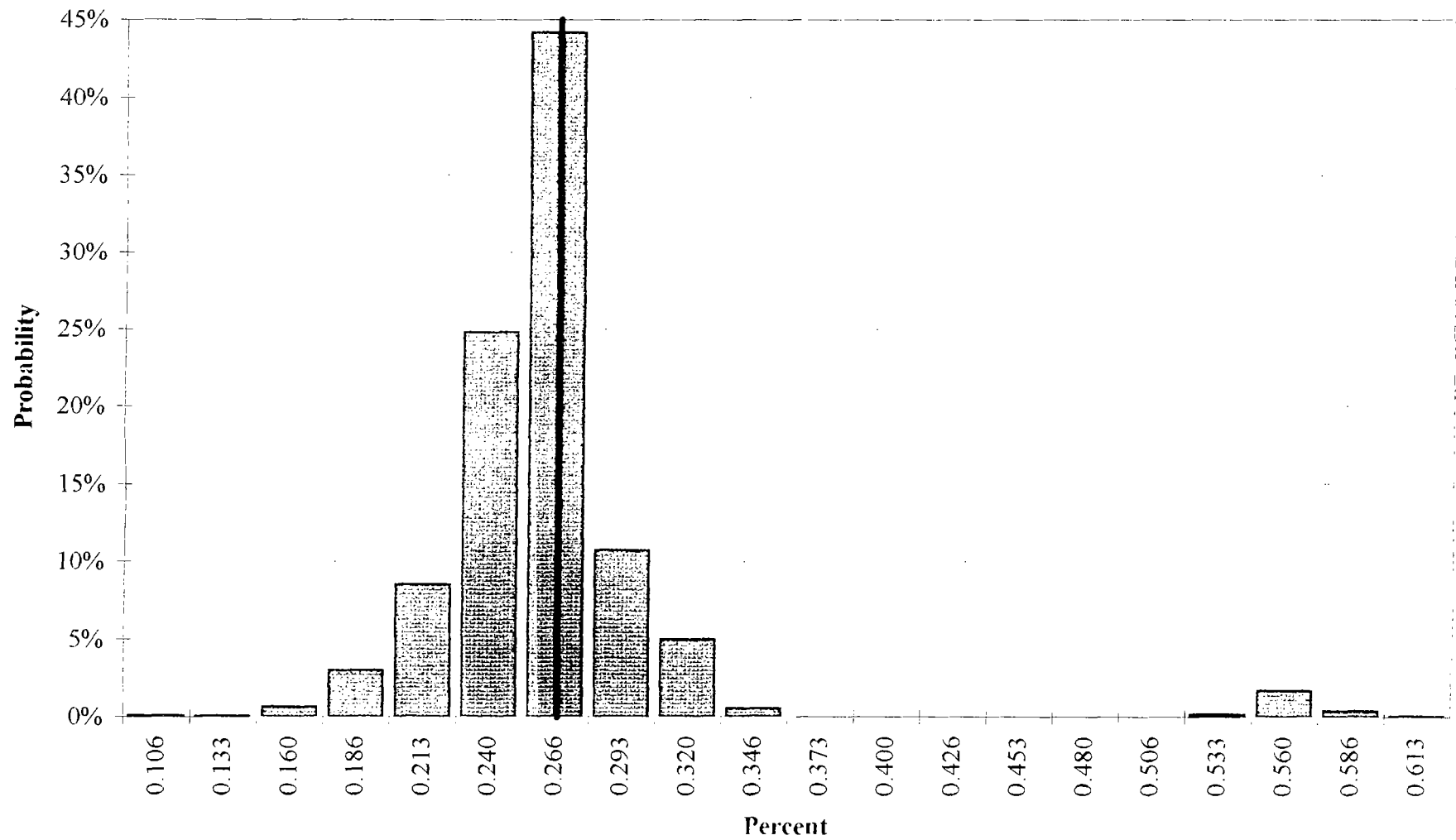


Figure 13
Probability Distribution
Tyler Allocation Percentage
Sinclair Manufacturing Company

EV = 0.279

Prepared by
Environmental Project Management, Inc.

Distribution for Tyler Allocation Percentage

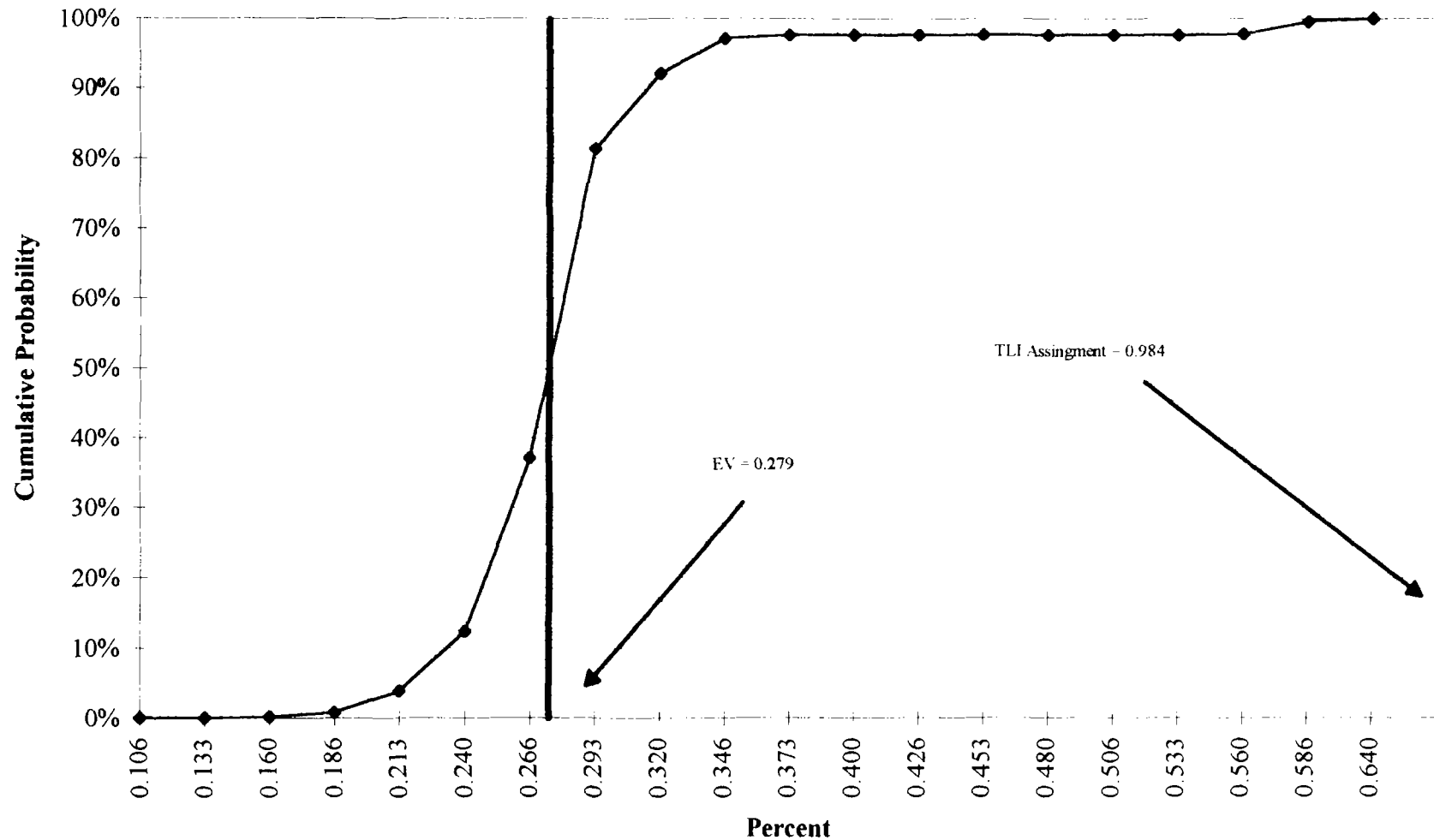


Figure 14
Cumulative Probability Distribution
Tyler Allocation Percentage
Sinclair Manufacturing Company

Name	Tyler Allocation Percentage, Tap
Minimum =	0.106
Maximum =	0.640
Mean =	0.279
Std Deviation =	0.0547
Mode =	0.224
5% Perc =	0.219
10% Perc =	0.234
15% Perc =	0.244
20% Perc =	0.252
25% Perc =	0.258
30% Perc =	0.262
35% Perc =	0.265
40% Perc =	0.268
45% Perc =	0.271
50% Perc =	0.273
55% Perc =	0.276
60% Perc =	0.279
65% Perc =	0.282
70% Perc =	0.285
75% Perc =	0.288
80% Perc =	0.291
85% Perc =	0.300
90% Perc =	0.313
95% Perc =	0.333

Figure 15
Tyler Allocation Percentage
Output Descriptive Statistics
Sinclair Manufacturing Company

Prepared By:
Environmental Project Management, Inc.

Correlations for Sinclair Stickney Landfill Percent Allocation

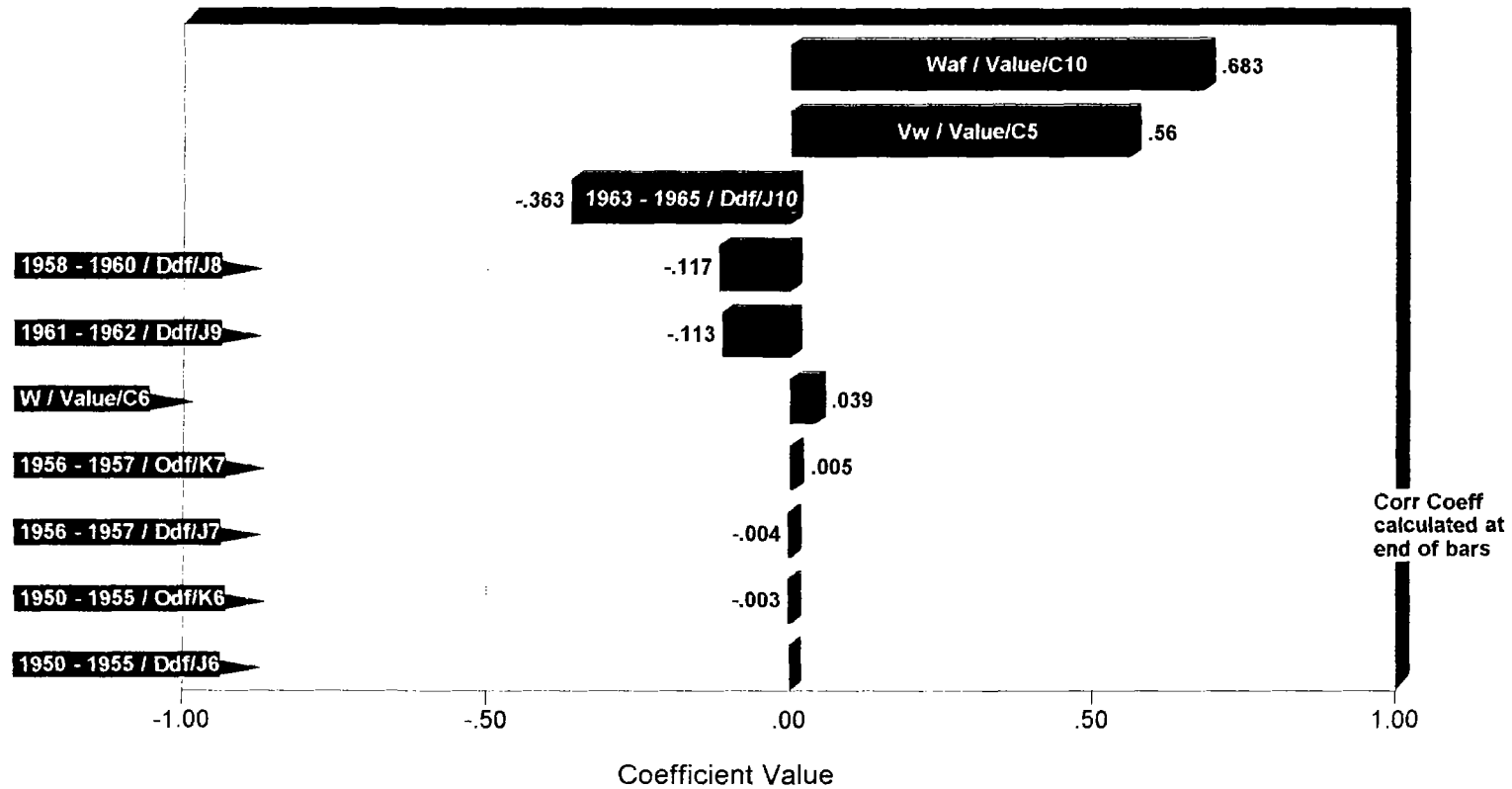


FIGURE 16

Correlations for Sinclair Tyler Allocation Percentage

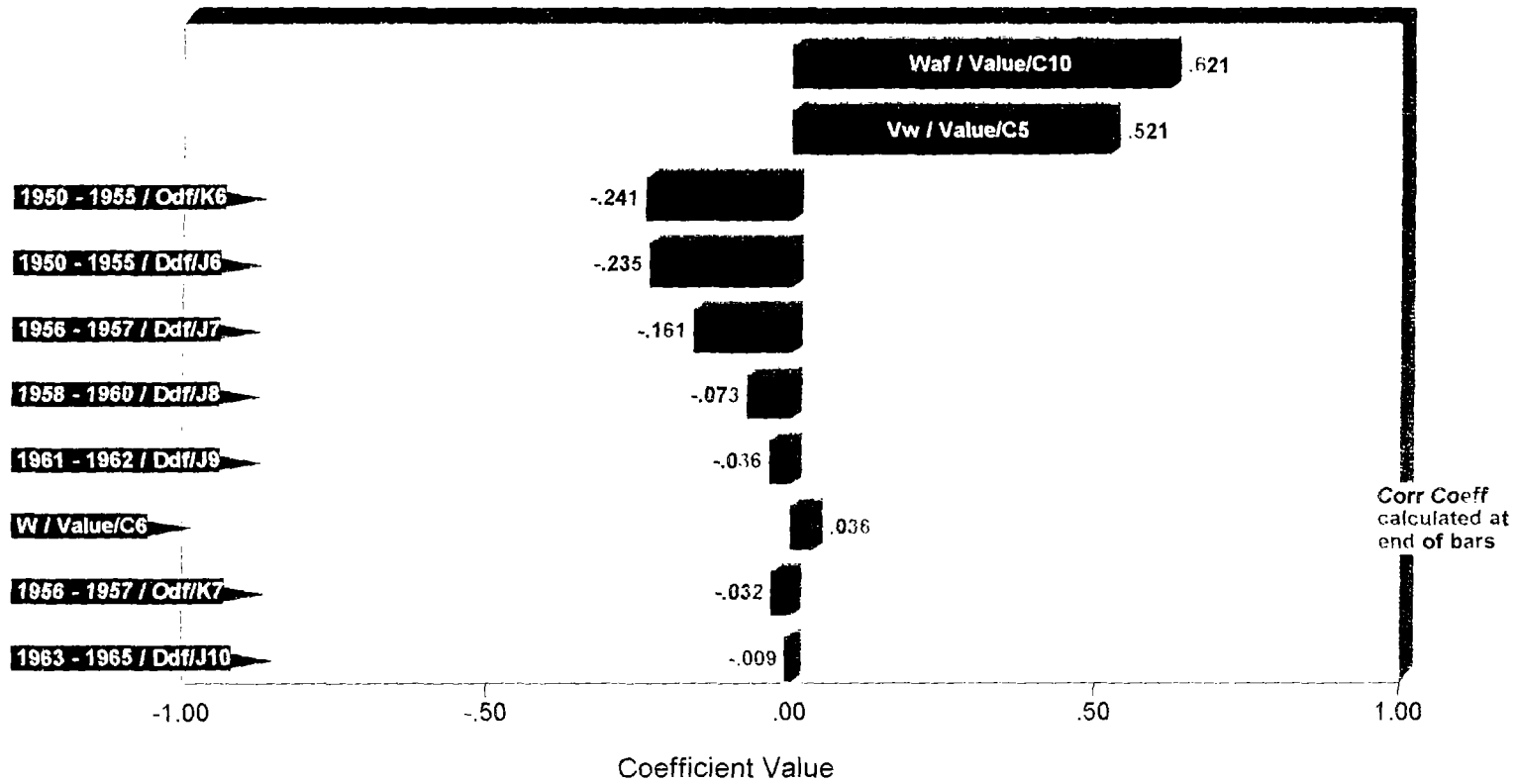


Figure 1

Appendix B

Justification of Input Probability Distributions

Dial Stickney/Tyler Cost Allocation Probabilistic Modeling Results



Justification of Input Probability Distributions

Dial Stickney/Tyler Cost Allocation Probabilistic Modeling Results

As described in the main report, a random variable is an uncertain value that may take on any value within a given range, as determined by a probability distribution (or more accurately a probability density function). There are many different types of probability density functions. In the book *Statistical Distributions*; the authors Merrian Evans, Nicholas Hastings, and Brian Peacock, describe thirty-nine 39 different probability density functions that have been found to represent various natural phenomena. All probability distributions can be placed into two major categories, discrete and continuous. A discrete probability density function is used to represent a random variable that takes on a finite number of values. A continuous probability density function is used to represent a random variable that can take on an infinite number of values.

All Monte Carlo simulation models involve some element of subjective estimation regarding the selection of probability density functions for representing random variables. In very fortunate instances an expert may be located who can recommend a specific probability distribution for representing a particular random variable. More frequently, an expert can be located who can provide meaningful estimates of the minimum, most likely, and maximum values representative of a particular random variable. In other cases the limited data set may provide information that will permit meaningful estimates of the minimum, most likely, and maximum values for a particular random variable. Whenever such estimates can be obtained there are three probability distributions that are commonly used to model the random variable including the:

- Triangular Distribution;
- Trigen Distribution; and,
- The BetaPert Distribution.

The Triang distribution is often considered to be appropriate where little is known a variable outside of an approximate estimate of its minimum (a), most likely (b) and maximum values (c).

There are two limitations that the user of the triangular distribution must keep in mind. The first is that inherent in the use of the triangular distribution is the assumption that the minimum and maximum values represent "absolute" minimums and maximums. In those cases where the user is more confident in identifying an "practical" minimum or maximum it often better to use the Trigen Distribution.

The second limitation that the user of the Triang distribution must remain aware of is that the mean and standard deviation of this distribution is equally sensitive to the three input parameters.

If this limitation is properly understood it can be used to improve the overall representativeness of the model. In those instances where the modeler is having difficulty in identifying a most likely value and it is believed that the minimum and maximum values should have a significant influence, the triangular distribution should be used. In instances where the modeler feels more



confident in the most likely value and does not feel that the minimum and maximum values should have a significant influence, another more appropriate distribution such as the BetaPert should be considered.

The Trigen distribution is very similar to the Triang distribution with the exception that the user is required input a "practical" maximum and minimum. In addition, the modeler is required to input the probabilities that the actual value could be below the minimum and maximum values. Often times it is easier to think in terms of these practical minimums and maximums as well as the probabilities that these minimum and maximums will be exceeded. Therefore as general rule, EPM favors this distribution over the Triang distribution.

The BetaPert distribution gets its name because it was commonly used in project scheduling networks known as program evaluation and review technique (i.e., PERT diagrams) and because it is a version of the beta distribution that has been found to be applicable to a variety of modeling situations. The BetaPert distribution is four times more sensitive to the most likely value than to the minimum and maximum values. The standard deviation of the BetaPert distribution is also less sensitive to the estimate of the extremes. Therefore, EPM commonly uses this distribution in those instances where there is more confidence with regarding the estimate of the most likely value and when it appears that the extreme values should have less impact on the distribution's calculated mean and standard deviation.

1.0 Sinclair Weekly Waste Production Volume, Vw

Distribution Type: BetaPert
Minimum: 12.0
Mode: 58.5
Maximum: 81.0
Mean: 54.5
Standard Deviation: 12.8
@Risk Formula RiskBeta(3.696, 2.305)*69 + 12

TLI's assigned volumetric rate of waste production for the Sinclair Facility is discussed on pages 197 and 198 of the TLI Report. The assigned number is based on the recollections of community sanitation drivers. According to the report, one driver recalls picking up waste from six three-yard containers two times per week. This is equivalent to a volumetric rate of 36 cubic yards per week. A second driver recalls picking up nine three-yard containers three times a week, equivalent to 81 cubic yards per week. TLI averaged these two numbers to arrive at 58.5 cubic yards per week. Initially this assigned value may seem fair since it is the average of apparent minimum and maximum values. However, it does not account for number of realities typical of manufacturing operations, including:

- ☐ The waste containers emptied by the drivers may not be 100 % filled;
- ☐ Product manufacturing at any plant depends on customer orders and seldom remains constant;



- Waste production is a function of product manufacturing; and
- Manufacturing plants often shut down for short time periods, for inventorying, maintenance, and holidays.

Given these realities, one can envision instances whereby the driver who recalls picking up waste from six three-yard containers twice a week, arrives to find only two of them filled. This would result in a pick up only 6 cubic yards of waste. On another day this same driver may find all of the containers are filled. This would result in a pickup of 18 cubic yards of waste. During times of peak customer orders, the driver who recalls picking up waste from nine three yard containers arrives to find all of them completely filled, resulting in a pickup of 27 cubic yards of waste. During times of moderate customer orders this same driver may arrive to find only five or six of the containers completely filled.

Since the actual weekly volume of waste production cannot be known with any degree of certainty, nor is it likely to be a constant number, it is best to represent this parameter as a **continuous** random variable. In order to represent this random variable EPM chose a Beta Pert distribution, having a minimum of 12, a maximum 81 and a most likely value of 58.5 cubic yards per week. The shape of the Beta-Pert function is defined the chosen minimum, maximum and most likely values. The minimum value was chosen by assuming a pickup of twice per week from six three-yard containers, whereby only two of them are completely filled. The maximum volume was chosen by assuming a pickup of three times a week from nine three-yard containers whereby all of them are filled. The most likely value was selected by assuming a pickup of three times a week from nine three-yard containers whereby six and one-half of the containers are filled. The mean value of the BetaPert distribution is determined by the function based on the input minimum, maximum and most likely values.

2.0 Weeks Per Year Waste Produced, W

Distribution Type:	BetaPert
Minimum:	48.0
Mode:	50.0
Maximum:	52.0
Mean:	50.0
Standard Deviation:	0.517
@Risk Formula	RiskBeta(3,3)*4 + 48

The TLI model assumes that the Sinclair Manufacturing Company produced waste at a constant rate of 58.5 cubic yards per week, **52** weeks per year (wk/yr) throughout the relevant time period (19 years). It is common for manufacturing plants to shut down periodically for purposes of holidays, group vacations, maintenance, retooling, and inventorying. It is unreasonable to assume that waste was constantly produced and picked up 52 weeks per year. Since there is not sufficient data to represent this input parameter as a fixed value (as assumed by the TLI model) it must be represented as a random variable and defined by a probability distribution function. Therefore, a BetaPert probability distribution function having a having a minimum of 48, a



maximum of 52 and most likely value of 50 weeks per year was used to represent this input parameter. The calculated mean value for this BetaPert distribution is 50 weeks per year

3.0 Sinclair Waste Category Adjustment Factor, Wtaf

Distribution Type:	Discrete
X Values:	0.40, 0.60, 0.40
Associated Probabilities:	0.25, 0.50, 0.25
@Risk Formula	RiskDiscrete({0.4, 0.6, 0.9},{0.25, 0.50, 0.25})

The responses from 6 witness testimonies contained within the evidentiary profile for Sinclair (pages 196 – 198, TLI Report) indicate that the primary waste from the facility was empty plastic bottles that used to contain Chlorine bleach. Two of the witness testimonies noted that oil soaked sorbent materials and other floor sweepings were also periodically placed in the dumpsters.

Page 2 of the Dura Response Document indicates that the normal practice of dealing with mislabeled or faulty plastic bottles was to empty them to the sewer prior to disposing them in the dumpsters. Also this same page indicates that plastic bottles, cardboard, and wood pallets comprised the bulk of the plant's waste. Attachment 7 to the Dura Response Document contains a summary of an interview with Mr. Danny. Mr. Rector a former employee of Sinclair held a number of positions throughout the course of his employment (1964 through 1988). These positions included material handler, machine operator, and maintenance supervisor. Mr. Rector confirms the plastic bottles were emptied to the sewers prior to disposal. Mr. Rector also indicated that efforts were made by the company to limit the amount of cardboard discarded to the dumpsters and that salvaged cardboard was periodically given to a scrap dealer.

Page 12 of the TLI Report presents the waste categories and their associated adjustment factors as defined by TLI. Page 197 of the TLI Report indicates that TLI categorized Sinclair's waste stream as *Industrial Process or Residuals or Scrap -- Possible contaminants of concern*. This is not a clear waste category designation. This designation, along with the information provided in the above two paragraphs indicates that the Sinclair's waste stream could fall into one of three possible waste categories including:

- Category 3 - Industrial or Process Residuals -- Possible Contaminants of Concern (adjustment factor 0.90)
- Category 5 - Industrial Plant Trash or Scrap -- Evidence of Evidence of Appreciable amounts of Oils, Paints, or Process-Related Sweepings with Possible Contaminants of Concern (adjustment factor, 0.60)
- Category 6 - Industrial Plant Trash or Scrap - Evidence of Minimal Amounts of Oils, Paints, Process-Related sweepings with Possible Contaminants of Concern (adjustment factor 0.40)

Based on a review of the TLI Report, it appears that TLI assigned Sinclair's waste stream to



Waste Category 3. Since the bottles represent a scrap containing only minimal amount of possible COCs, it would appear that Category 6 would be more appropriate. Categories 3 and 6 have adjustment factors of 0.90 and 0.40 respectively. These categories represent the extremes of the potential assignment. Category 5 with a waste adjustment factor of 0.60 represents a type of a middle of the road assignment. In an effort to account for the two extremes as well as the middle point, EPM applied a discrete probability distribution which provided a 25 % probability to Categories 3 and 6 and a 50% probability to Category 5.

4.0 Sinclair Generator Transporter Waste Adjustment Factor, Gtaf

Page 198 of the Allocator's Report indicates that TLI assumed that the Community sanitation hauled waste from the Sinclair facility to the City landfills during the entire relevant time period from 1950 through 1968. This assumption is based on the testimonies of from six different Community sanitation drivers. The drivers cover a time span from the mid to late 1950s to the end of the relevant time period (1968). Therefore, it appears that this is a good assumption and that the Generator Transporter factor can be assigned a fixed value of 0.75 in accordance with the general allocation procedure.

5.0 Year Adjusted Deposition Factors

Page 9 of the Allocator's report presents year based destination default factors that are used for allocating the waste produced by the various contributors among the Stickney, Tyler and Dura landfills. These are collectively referred to as the city landfills. Also Page 9 of the TLI Report indicates that for particular parties evidence may be available supporting modification of the destination default factors. Page 10 of the TLI Report goes on to say the application of different waste destination factors to some parties while not to all would significantly undermine the use of any waste destination default factors.

Listed below are seven witness statements regarding disposal of Sinclair wastes to the Dura Landfill. The first four statements are from the Sinclair evidentiary profile contained within the TLI Report. The last three statements are from attachments to Dura Response Document.

1. **Witness EPA-M-3:** This witness was a driver for community sanitation. He states that the waste he picked up from the Sinclair Facility was taken to the Dura Landfill between the years 1960 through 1968
2. **Witness EPA 1995-2. pp 136-138:** This witness was a driver for community sanitation that recalled picking up waste from the Sinclair facility with a front and rear loader, starting in the late 1950s (no indication is provided for when he stopped working this route). According to this driver waste picked up with the front loader went to the Dura or Stickney landfill while waste picked up with the rear loader might have went to the Tyler landfill.
3. **Affidavit of Nelson Osenbagh (QUE000220):** Mr. Osenbagh was a driver for



community sanitation. He states "I hauled waste from Sinclair Manufacturing Co. to the Dura Landfill."

4. **Affidavit of Paul Dauterman (QUE000218):** Mr. Dauterman worked for community sanitation as a waste hauler from 1956 to 1969. He states "I hauled waste from the Sinclair Manufacturing Company to the Dura Landfill."
5. **Correspondence from Steven F. Harantha to Mr. R. E. Wilmouth dated June 16, 1993:** "CSS hauled industrial waste from Sinclair Detroit Avenue to the Dura Landfill from inception of Sinclair activities in 1962 until 7/68"
6. **Summary Steven Harantha Interview of Mr. William C. Fitch:** "Bill said that he "Suspected" when any Sinclair trailers were used to dispose of non-salvageable cases of product, they were hauled to either the Dura Landfill or the Kings Road Landfill."
7. **Summary Steven Harantha Interview of Mr. William L. Daily:** "Bill said that he always hauled product cases to the Dura Landfill municipal dump."

Given these statements, not assigning different wasted destination default factors to the Sinclair facility would hardly seem fair. Therefore, EPM has replaced several of the year based waste destination default factors to represent the fact that a larger proportion of the material may have been transporter to the Dura Landfill. Random variable were used to replace these default factors in order to represent the uncertainty associated with these values. The various replacements are discussed in the following sections.

5.0.1 Sinclair Waste Deposition Default Factors 1950 - 1955; Ddf1, Odf1

Prior to 1962 the Sinclair Manufacturing Company was located on Brown Street in Toledo, Ohio. None of the witness statements presented above provided any indication of where the waste was taken to while the facility was at this location. However, it is known that the Dura landfill began operation in 1952. Therefore, it is possible that wastes from Sinclair facility were taken to Dura landfill during the period of 1952 through 1955. In addition, it is possible that one of the other landfills known to be in operation at the time including King Road, Western Avenue, Stevens, and Consaul, was the primary waste deposition location. The original default assumptions developed by TLI for this time period were 0.80 for the Tyler landfill and 0.20 for other landfills. In order to address the likelihood that waste material was taken to the Dura Landfill in the years 1950 through 1955, EPM chose to replace the default deposition factor for the Dura landfill (Ddf1) during this time period with a Random variable. In addition, EPM also chose to replace the other landfills deposition factor (Odf1) with a random variable to represent the uncertainty associated with this deposition factor. The following probability distribution was utilized to represent both of these parameters.

Distribution Type:
Minimum:

Trigen
0.10



Mode:	0.20
Maximum:	0.40
Probability that the Variable Could be Below the Minimum:	5 %
Probability that the Variable Could be Above the Maximum:	95%
Mean:	0.24
Standard Deviation:	0.09
@Risk Formula	RiskTrigen(0.1, 0.2, 0.4, 5, 95)

The distribution was chosen by first giving consideration to the mode, also known as the most likely value. A mode of .20 was selected because it represented the original default value for the other landfills deposition factor. The minimum value was selected by dividing the mode by 2 and the maximum value was selected by multiplying the mode by 2. The Trigen distribution was chose over the BetaPert in this instance because it was believed that there was significant uncertainty in estimating the mode and that the practical minimums and maximum should be taken into equal consideration. Having input this same distribution for Ddf1 and Odf1, the Tyler landfill deposition factor (Tdf1) is determined by subtracting Ddf1 and Odf1 from the number 1.

5.0.2 Sinclair Waste Deposition Default Factors 1956 - 1957; Ddf2, Odf2

The probability distribution functions used to represent the Dura landfill deposition factor (Ddf2) during the years of 1956 and 1957 is presented below.

Distribution Type:	Trigen
Minimum:	0.20
Mode:	0.40
Maximum:	0.80
Probability that the Variable Could be Below the Minimum:	5 %
Probability that the Variable Could be Below the Maximum:	95%
Mean:	.479
Standard Deviation:	.181
@Risk Formula	RiskTrigen(0.1, 0.2, 0.4, 5, 95)

The distribution was chosen by first giving consideration to the mode. A mode of .40 was selected because it represented twice the original default value assigned by TLI for the Dura landfill during this time period. This was done as a conservative way of accounting for the fact that the 6 of the 7 witnesses statements presented in Section 5.0 stated that all of the wastes they hauled from Sinclair went to the Dura Landfill. The minimum value was selected by dividing the identified mode by 2 and the maximum value was selected by multiplying the mode by 2. The Trigen distribution was chose over the BetaPert in this instance because it was believed that there was significant uncertainty in estimating the mode and that the practical minimums and maximum should be taken into equal consideration.

The probability distribution functions used to represent the Other Landfills deposition factor (Odf2) during the years of 1956 and 1957 is presented below.



Distribution Type:	Trigen
Minimum:	0.05
Mode:	0.10
Maximum:	0.20
Probability that the Variable Could be Below the Minimum:	5 %
Probability that the Variable Could be Below the Maximum:	95%
Mean:	0.12
Standard Deviation:	0.045
@Risk Formula	RiskTrigen(0.05, 0.10, 0.2, 5, 95)

The distribution was chosen by first giving consideration to the mode. A mode of .10 was selected because it represented was the original default value assigned by TLI for the Other Landfills during this time period. The minimum value was selected by dividing the identified mode by 2 and the maximum value was selected by multiplying the mode by 2. The Trigen distribution was chose over the BetaPert in this instance because it was believed that there was significant uncertainty in estimating the mode and that the practical minimums and maximum should be taken into equal consideration.

5.0.3 Sinclair Waste Deposition Default Factors 1958 - 1960; Ddf3

The probability distribution function used to represent the Dura landfill deposition factor (Ddf3) during the years of 1958 and 1956 is presented below.

Distribution Type:	BetaPert
Minimum:	20.0
Mode:	0.60
Maximum:	0.70
Mean:	0.55
Standard Deviation:	0.0866
@Risk Formula	RiskBeta(4.2,1.8)*0.5 + 0.2

The distribution was chosen by first giving consideration to the mode. A mode of .60 was selected because it represented three times the original default value assigned by TLI for the Dura landfill during this time period. This was done as a way of accounting for the fact that the 6 of the 7 witnesses statements presented in Section 5.0 stated that all of the wastes they hauled from Sinclair went to the Dura Landfill. The minimum value was selected by dividing the identified mode by 2 and the maximum value was selected by multiplying the mode by 2. The BetaPert distribution was selected in this instance as a way of limiting the effect of the maximum and minimum values.

Algebra was utilized to develop equations for Stickney, Tyler and Other landfills waste deposition factors (Sdf3, Tdf3, and Odf3) in terms of Ddf3. These equations were developed in such a manner as to keep Sdf3, Tdf3, and Odf3 in the same relative proportions to each other as



assigned by TLI while permitting the Ddf3 vary throughout its range in accordance with its assigned probability distribution.

5.0.4 Sinclair Waste Deposition Default Factors 1961 - 1962; Ddf4

The probability distribution function used to represent the Dura landfill deposition factor (Ddf4) during the years of 1961 and 1962 is presented below.

Distribution Type:	BetaPert
Minimum:	0.30
Mode:	0.65
Maximum:	0.70
Mean:	0.60
Standard Deviation:	0.065
@Risk Formula	RiskBeta(4.5,1.5)*0.4 + 0.3

The values for the minimum, mode, and maximum values for this distribution were selected in such a way as to achieve a mean that was 5 percentage points above the mean associated with Ddf3, which is associated with the years 1958 and 1960. This was done as a conservative way of accounting for the fact that the 6 of the 7 witnesses statements presented in Section 5.0 stated that all of the wastes they hauled from Sinclair went to the Dura Landfill. It was also done to account for the increasing use of the Dura landfill throughout the relative time period. The BetaPert distribution was selected in this instance as a way of limiting the effect of the maximum and minimum values.

Algebra was utilized to develop equations for Stickney, Tyler and Other landfills waste deposition factors (Sdf4, Tdf4, and Odf4) in terms of Ddf4. These equations were developed in such a manner as to keep Sdf4, Tdf4, and Odf4 in the same relative proportions to each other as assigned by TLI while permitting the Ddf3 vary throughout its range in accordance with its assigned probability distribution.

5.0.5 Sinclair Waste Deposition Default Factors 1963 - 1965; Ddf5

The probability distribution function used to represent the Dura landfill deposition factor (Ddf5) during the years of 1963 and 1965 is presented below.

Distribution Type:	BetaPert
Minimum:	0.40
Mode:	0.80
Maximum:	0.90
Mean:	0.75
Standard Deviation:	0.958
@Risk Formula	RiskBeta(4.2,1.8)*0.5 + 0.4



The values for the minimum, mode, and maximum values for this distribution were selected in such a way as to achieve a mean that was 15 percentage points above the mean associated with Ddf4, which is associated with the years 1961 and 1962. This was done as a conservative way of accounting for the fact that the 6 of the 7 witnesses statements presented in Section 5.0 stated that all of the wastes they hauled from Sinclair went to the Dura Landfill. It was also done to account for the increasing use of the Dura landfill throughout the relative time period. The BetaPert distribution was selected in this instance as a way of limiting the effect of the maximum and minimum values.

Algebra was utilized to develop equations for Stickney, Tyler and Other landfills waste deposition factors (Sdf5, Tdf5, and Odf5) in terms of Ddf5. These equations were developed in such a manner as to keep Sdf5, Tdf5, and Odf5 in the same relative proportions to each other as assigned by TLI while permitting the Ddf3 vary throughout its range in accordance with its assigned probability distribution.



ATTACHMENT 4

Jane E. Montgomery
(312) 258-5508
Email: jmontgomery@schuffhardin.com

February 21, 2000

*Subject to Fed. R. Evid. 408
For Settlement Purposes*

VIA FACSIMILE

John Edgcomb
Edgcomb & Blocker, LLP
311 California St., Suite 340
San Francisco, CA 94111

Re: STAG et al. v. Earl Scheib et al.

Dear John:

I am in receipt of your letter of February 11, 2000, and provide the following in response.

XXKem Site Costs Generally

All of the defendants have asked about the note on Exhibit 1 to Plaintiffs' Response to Safety-Kleen's First Set of Interrogatories. The Note states: "Certain costs expended at Stickney are attributable to XXKem and are included in the Stickney costs in this Table." The note reflects the fact that certain work, and costs expended therefor, applied to all areas affected by the Removal Action or were so integrated into the whole work product that costs would be difficult to separate by line item. In that case, dividing costs on an acreage basis may be a useful way to begin to segregate these costs. However, to the extent that a court determines that all of the parties are jointly and severally liable for all of the response costs, that is, that no Section 107 claim exists against SafetyKleen, then the segregation of these costs into XXKem Site and Stickney Site is immaterial and counterproductive for settlement purposes.

While STAG has discussed using the proportionate areas of the Central Portion of the XXKem Site to the Stickney Site as a valuable tool to begin allocating costs, STAG does not view it as the only factor affecting allocation. Other factors include, but are not limited to, delays in beginning construction and corresponding increased costs, additional safety or handling costs related to XXKem Site contaminants, direct investigation costs, increased construction costs, and the future unknown risks caused by the contaminants found in the Central Portion of the XXKem Site. According to the construction surveyors, the Central Portion of the legal parcel known as the XXKem Site comprises 7.47% of the total area on which the cover system was constructed.

As noted in our letter of this date to Andy Perellis, WCC tracks costs by task numbers. Task S20 represents the design effort at Stickney. The re-design charges are represented in Task S20R for XXKem.

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These costs (\$31,058.46) are included in total Stickney costs and have not been separately itemized as XXKem costs on Exhibit 1.

Construction costs were higher due to additional work in the Central Portion of the XXKem Site. Construction workers were warned of the increased contaminant levels in this area. Survey markers were added to show the boundaries of the XXKem Site. Re-grading of waste in the area was confined to movement of waste within the area of the XXKem Site. These were "means-and-methods" specified by the construction manager in dealing with the construction and were not increases for which costs were separately tracked. These costs are not broken out separately on Exhibit 1.

XXKem Past Costs

URS Greiner Woodward Clyde Costs are tracked by Task or Subtask Number. No list exists of which invoice charges time and expenses for which Task. However, all invoices have been produced. The following are the tasks for which the costs are wholly attributable to the XXKem Site issues.

EE/CA Phase, Task 6L, Additional Sampling XXKem Site investigation	\$62,250.77
Design Phase, Task S22, Construction Dewatering (south ditch) Consider ways to limit contact with contaminated water	\$22,362.65
Design Phase, Task S23, XXKem Issues Evaluation of XXKem issues as they impact the design and remedy goals	\$50,402.90
Design Phase, Task S80, Meetings with Agencies Meetings with U.S. EPA and Ohio EPA regarding the XXKem Site	\$23,528.00
Construction Phase, Task 2105X, XXKem Sampling (9/98) Baseline sampling of XXKem area wells	\$37,021.00
Subtotal	\$195,585.32

In addition, sampling in September 1999 of wells and contaminants (not required for performance monitoring) for purposes of tracking an XXKem plume was \$12,403.36 (data validation has not yet been invoiced) (Parsons Summary Table for amounts invoiced through 1 December 1999, attached and labeled STAG 035144).

Future Costs

Future costs generally fall into the categories of Performance Monitoring and Operations and Maintenance. These tasks are ongoing, with performance monitoring continuing for an indefinite period (currently estimated at four more years) until risk reduction goals are met, and operations and maintenance

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continuing for thirty years. Because no one can accurately predict what will be needed for these future items, the Engineer's Cost Estimate makes certain assumptions. These assumptions appear to be the best judgment upon which to base future costs. As noted in our letter of this date to Andy Perellis, we have requested that WCC provide to us the worksheets that further define the assumptions used in the cost estimates. These will be provided to us within the next week and will be sent to you then.

Plaintiffs cannot further quantify any work that may be necessary in the future or the risks that the U.S. EPA will require additional remediation measures. Plaintiffs' future cost estimates are based on the WCC estimates previously produced.

Total Costs and Receipts

Pending conclusion of settlements with the Department of Justice, plaintiffs believe they have concluded three settlements which are not included in the amounts in its Responses to Interrogatories. Plaintiffs are not likely to receive the funds from these settlements until the Department of Justice notices the settlements it has concluded with the same three parties in the Federal Register. Plaintiffs do not know when such a notice will occur.

The three settlements have been reached with International Paper for Chase Bag, Reichert Stamping, and Sherwin Williams, and the three settlements total \$83,000.

In addition, plaintiffs believed they had reached settlements with Earl Scheib and Eastman Kodak. However, a dispute as to whether and how the DOJ claims affect the settlements has not been resolved. The settlement amounts tentatively agreed to with these two parties are not included in the amount above.

Excess Costs

Excess Costs are defined by and the agreement to pay specific charges as Excess Costs are defined in Amendment No. 1 to the Settlement Agreement and Participation Agreement (previously produced but attached hereto for the convenience of the parties as STAG 035132 - 035143). The definition of Excess Costs is contained in the Amendment and will not be reiterated here. Documents defining those Excess Costs are attached to the Agreement.

Excess Costs are primarily for the following items: \$60,000 in Redesign Costs which were paid by the City of Toledo and are not included in any of the worksheets for Exhibit 1 or in the total figure of Excess Costs found in the Response to Interrogatories; a worksheet prepared by the STAG Technical Committee in conjunction with its contractors as to changes in estimated quantities of materials necessary for the 1996 Design versus the 1997 Design; and in several small construction changes which occurred during the construction phase of the work. The referenced documentation is attached hereto for ease of the parties. Separate invoices to the City were not generated for the Excess Costs due to the manner in which the City received payments from the Ohio Water Development Authority Loan Fund. I am confirming whether these Excess Costs are included in the Construction Phase of the Exhibit 1 and will modify the Construction Phase table if these costs were included. I will transmit this information to you at the time I transmit the additional WCC worksheets on Future Costs.

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The City of Toledo has not requested any work or additional items which would result in Excess Costs to date. If such requests are made, the requests and costs will be governed by the provisions of Amendment No. 1.

Delay Claim

Plaintiffs continue to pursue the delay claim against SafetyKleen. From its first meeting on August 1, 1996, with McKesson/SafetyKleen, STAG informed SafetyKleen that delay in construction would be costly. E³ was asked to and did prepare in 1997 an estimate of the costs for delaying the construction, and these costs were clearly estimated at slightly over \$1,000,000 in 1997 (see attached document which has previously been produced, identified as STAG 028347 - 028359). Actual Capital Construction Costs (without engineering, legal or any other costs) were 23% greater (\$2,821,025) than the original Enterprise Environmental & Earthworks estimate (1996 Estimate). The 1996 E³ Estimate and the construction invoices have been produced. In addition to the capital construction costs, the Exhibit 1 Table labeled Removal Design Phase includes legal and engineering costs incurred in attempting to resolve the XXKem Site issues and allow the construction to move forward, costs which were avoidable had SafetyKleen promptly addressed the lagoon issues.

Cost of soil was the largest single increase in costs and was primarily due to the loss of soil that the City of Toledo had agreed to provide at nominal cost in calendar year 1997. The soil was available from the construction of a new sanitary landfill cell at the Hoffman Road Landfill in the City of Toledo. This soil was unavailable in 1998 (the cell had been dug and the soil had gone elsewhere) and, due to other market conditions, primarily the competing Jeep expansion project which was announced in late July 1997, soil, and the truckers necessary to haul soil, was only available in Toledo at very high costs. Actual Cost of soil for the Engineered Base was 240% over the 1996 Estimate (\$908,733 over the 1996 Estimate). Actual Cost of protective cover soils was 184% over the 1996 Estimate (\$802,957 over the 1996 Estimate). Actual Cost of vegetative soil material was 143% over the 1996 Estimate (\$176,051 over the 1996 Estimate). The 1996 Estimate was based on identified actual sources of material and actual market conditions. The contractor was able to favorably negotiate other savings for the project which mitigated some of the increased soil costs incurred by the delay in construction.

Itemized Claim Against SKE

SafetyKleen has asked us to itemize the claim against it with particularity. Plaintiffs anticipate fully setting forth their position as to SafetyKleen's share in their Initial Position Paper. However, the categories of costs previously asserted are still applicable and will be pursued in the Position Paper.

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Conclusion

We hope this letter provides a more complete understanding of the Plaintiffs' claim for response costs. Plaintiffs will endeavor to provide more specific information or to direct SafetyKleen or other defendants to documents already produced in the event that more specific answers are still required.

Very truly yours,


Jane E. Montgomery

JEM/klk

cc: John Barkett (via facsimile w/encls.)
Participants in the Mediation (via facsimile w/encls.)
Charles H. R. Peters (w/encls.)
Kevin B. Hynes (w/encls.)

Jane E. Montgomery
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February 21, 2000

*Subject to Fed. R. Evid. 408
For Settlement Purposes*

VIA FACSIMILE

Andrew Perellis
Seyfarth, Shaw, Fairweather & Geraldson
35 East Monroe St., Suite 4200
Chicago, IL 60603-5803

Re: Stickney/Tyler Administrative Group et al. v. Earl Scheib et al.

Dear Andy:

I am in receipt of your letter of February 9, 2000, which poses seventeen questions with respect to costs at Stickney and Tyler. In addition, I am in receipt of a February 11 letter from David Hoffmann with several additional questions.

For the most part, Plaintiffs already have provided the information requested. All relevant invoices have been provided. With the exception of SH&W invoices, I believe those invoices were included in the first 60,000 pages of documents which were imaged. Consequently, all defendants have in their possession the relevant backup for the invoices which include all information provided by contractors for payment of the invoices. All of the defendants with the exception of John Edgcomb indicated they did not want copies of anything else. SH&W invoices have been copied by John Edgcomb and you may arrange to receive copies of those invoices from him pursuant to the Initial Case Management Order.

Settlement Amounts

With respect to the first five questions in Andy's letter, STAG entered into settlements requiring confidentiality of settlement amounts. However, the amount of aggregate settlements has been provided as outlined below.

In the Plaintiffs' Response to SafetyKleen's First Set of Interrogatories, the names of each of the settling parties, along with the names of prior entities for whom the settling party took responsibility, were provided. In the same response, the settling parties were divided into classes and the aggregate settlement amounts by class were provided. The TLI Allocation sets forth allocation percentages, as a percent of the

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generator total and converted to a percentage of the total site. We believe you can each manipulate the numbers from there in whatever manner you so choose.

The Director Parties commitment falls into several categories: First, the Director Parties are committed to a specific dollar amount. Second, they are committed to paying all costs for the removal action, in the event that there are cost overruns or that actions against recalcitrant liable parties fail to collect sufficient dollars for the actions. Third, they are committed to providing competent staff to manage the projects, including in-house staff and consultants or technicians. Fourth, they incur litigation costs for pursuing litigation against recalcitrants to fund the shortfall. At the time the first settlement was reached in 1996, only about 50% of the parties to whom a share had been allocated were participating in the settlement and total response costs were estimated at \$23 million.

The Director Parties' shares to date are as follows: Honeywell International, Inc. (f/k/a AlliedSignal, Inc.), \$2,130,900; DaimlerChrysler Corporation, \$2,000,000; E.I. du Pont de Nemours and Company, \$1,750,000; GenCorp Inc., \$1,750,000; Browning-Ferris Industries of Ohio and Michigan, Inc., \$875,000; and Federal Mogul Corp., \$746,419. The Directors are obligated to pay costs as needed over these shares on a pro rata basis among the six. As of calendar year 1999, the Director Parties have paid between 88% and 92% of their total committed shares, and are obligated to pay all response costs over those committed shares if there is a shortfall. As of the end of 1999, that shortfall is expected to be substantial.

The aggregate percentage committed by Participating Parties is also shown in the Plaintiffs' Response to SafetyKleen's First Set of Interrogatories. This percentage is billed on an ongoing basis as a percentage of costs incurred. That is, the three Participating Parties must pay their agreed-upon percentage as those costs are incurred by the STAG. Assessments are made as needed. At this point, these assessments are being made approximately twice per year.

Group Organization

To the extent that the remaining questions characterize the amounts billed as "excessive" or "duplicative," this characterization is clearly unwarranted, since you have made no effort to examine any of the invoices in your possession. Backup documentation has been provided. Please review the invoices and, to the extent you then have questions about specific amounts or time charges, we will be happy to provide responses to questions about "excessive" or "duplicative" charges.

To provide a framework for understanding and responding to the remaining questions, a short historical summary of the three groups conducting different phases for which response costs have been incurred is provided below. Each of the groups was formed using fairly standard PRP agreements, and those agreements have been produced to the defendants.

From 1994 to 1996, the Stickney/Tyler Group had six participants: AlliedSignal, Inc., DuPont, Chrysler, Dana Corporation, Toledo Edison and GenCorp. Each was separately represented by counsel and by a technical committee representative (with the exception of Dana Corp. who did not provide a technical committee representative). The Stickney/Tyler Group conducted the Engineering Evaluation and Cost Analysis (EE/CA) under an Administrative Order on Consent, dated May 2, 1994, with U.S. EPA. All work was done in accordance with the NCP.

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In January 1996, the Stickney/Tyler Allocation Group was formed. The Stickney/Tyler Group assigned its remaining treasury to the Stickney/Tyler Allocation Group. The Stickney/Tyler Allocation Group consisted of 24 entities. Each of the current Directors, or its predecessor-in-interest, was a member of the Allocation Group, paid for this work, and were adverse to each other and to all other members. Each was separately represented by counsel, some members provided technical committee representatives, and some members provided allocation and other committee representatives. Again, no common counsel was retained. The Stickney/Tyler Allocation Group authorized and paid for the Removal Designs pursuant to a commitment contained in an April 1, 1996, Good Faith Offer Letter to U.S. EPA. All work was done in accordance with the NCP.

In October 1996, the Stickney/Tyler Administrative Group (STAG) was formed. The Stickney/Tyler Allocation Group assigned its treasury to the Stickney/Tyler Administrative Group. Cash-out Parties, the City of Toledo, and Participating Parties assigned their claims, including claims for work done by the Stickney/Tyler Group and the Stickney/Tyler Allocation Group, to the Director Parties. The STAG membership and committees have been previously outlined. Each member of STAG is separately represented by counsel, and most members provide technical committee representatives. Common counsel was retained. The STAG implemented the approved Removal Designs in accordance with an Administrative Order on Consent with U.S. EPA. All work was done in accordance with the NCP.

Contractors Retained by One or More of the Groups

To the extent that an understanding of the tasks assigned to each contractor over time is helpful in understanding costs, we provide that below.

The group retained Woodward-Clyde Consultants (WCC) to design and undertake the EE/CA. (Woodward-Clyde Consultants was purchased by URS Corp. in 1998 and the company is now known as URS Greiner Woodward Clyde.) WCC invoices track time and costs by Task numbers, which are found in the backup for the invoices.

After a short period of time, the group determined it needed a single point of contact with the U.S. EPA and to oversee Woodward Clyde, research issues with a technical/legal cross-over, and provide initial drafts for comment on joint technical issues. For various reasons, the companies selected Chrysler's outside counsel, SH&W, to be the liaison counsel. SH&W tracked its liaison counsel fees and disbursements separately from the time it expended in representing Chrysler Corp. and continued to do so through September 1997 when SH&W ceased representing Chrysler individually and acting as liaison counsel. Neither the fees nor disbursements paid to SH&W in its separate representation of Chrysler are included in the costs claimed in this action. None of the SH&W costs the group is claiming were incurred directly or in preparation for this litigation. Those costs are separately tracked and invoiced. Disbursements are direct costs for phone, facsimile, copying, travel or similar costs that were invoiced to the project.

As liaison counsel, SH&W provided the following services: coordinated weekly phone calls for all group members, provided the link between the group members and the U.S. EPA (collected and transmitted information from the group to the agency and vice versa); researched and prepared the ARARs list for the EE/CA; represented the group with respect to technical issues in front of the agency; paid bills after review and approval of the group; drafted correspondence at the direction of the group and coordinated the receipt and

Andrew Perellis
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incorporation of comments from the group; prepared assessments at the direction of the group; and similar activities.

In January 1997, the Stickney/Tyler Allocation Group elected to have SH&W continue on as liaison counsel, with essentially the same tasks as outlined above.

In September 1997, the Stickney/Tyler Administrative Group (STAG) was formed. The STAG Steering Committee selected SH&W as common counsel for the group. The Director Committee also selected SH&W as common counsel for the Director Committee. At this point, SH&W no longer represented the separate interests of Chrysler Corporation.

As common counsel, SH&W has separately tracked work done to implement the remedy (which are fully recoverable) from the work of pursuing non-settlers. Costs claimed in this action are for implementation of the remedy.

Implementation costs include: compliance with the AOC, including obtaining access to all parcels (Tyler was an active junkyard with an intensely uncooperative owner and XXKem had essentially been abandoned); negotiation and drafting of contracts for implementation of the remedy; negotiation with the agency regarding the XXKem source; oversight of construction issues, including technical issues, negotiation and resolution of regulatory issues; review and oversight of budgets; payment of contractors; preparation of assessments and other treasury issues; oversight of community relations issues; reporting to the agency; serving as committee chair; and the like.

Dykema Gossett was selected by the Stickney/Tyler Group to retain and oversee the work of Orion Management International, Inc., a private investigation firm that investigated use of the sites in order to increase the number of PRPs for the sites. In addition, Dykema Gossett used the information obtained by Orion to locate the service addresses, and the chain of succession to a current entity where such searches were necessary. These costs are fully recoverable.

Orion Management International, Inc. reviewed records and interviewed witnesses to identify PRPs for the sites. Their investigation was fully documented in seven volumes of information, and all seven volumes have been produced (and I believe should be on each of your CDs).

TLI Information Systems, Inc. was retained by the Stickney/Tyler Allocation Group to perform a third-party independent analysis of the evidence to identify all parties linked to the sites. In that effort, they reviewed and summarized source documents including witness statements, affidavits and interviews; mediated certain issues with the City of Toledo; interviewed certain City of Toledo and other witnesses; reviewed issue papers, participant allocation responses, various challenges, and legal submissions; and prepared a detailed allocation report. TLI also mediated a two-day settlement session.

Enterprise Environmental & Earthworks (E³) was selected as the construction manager for the project. E³ coordinated and supervised all construction on the project. WCC provided engineering oversight and on-site construction oversight throughout construction of the cover systems.

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Funk Luetke Skunda is a public relations firm located in Toledo. Funk Luetke Skunda coordinated various aspects of the community and public relations program relating to acceptance of the removal action and public information as to its progress. Tasks included: contacts with local government and community activists to explain the proposals; providing media contact and assistance at public meetings; being on call for public relations issues; and coordinating and mailing newsletters to over two thousand interested parties, including all neighbors of the sites.

Alpha Professional Services is currently the contractor (after bidding) for the Operations and Maintenance tasks. These tasks include inspections for vandalism and trespassing, inspecting for erosion or other issues with the cap, maintaining vegetation, including mowing, monitoring site security, and providing access as required to other contractors, the City of Toledo, agencies or utilities.

Parsons Engineering Science is currently the contractor (after bidding) for sampling and analysis of samples as required by the Performance Monitoring Plan and the Operations and Maintenance Plan. Results of sampling are reported to the group and used by URS Greiner Woodward Clyde to analyze performance of the remedy.

URS Greiner Woodward Clyde continues to be the technical project director. Tasks currently include limited monitoring of the data for data quality and performance of the remedy; and specific engineering issues related to the cap or other engineered components of the remedy as the issues arise.

XXKem Site Costs

Certain costs in this case may be chargeable as direct costs for releases from a facility which is separate from either the Stickney or the Tyler Site, that is, the Central Portion of the XXKem Site. Issues as to whether the Central Portion of the XXKem Site is a separate facility and as to whether parties liable for the Stickney and Tyler Sites are also liable for the XXKem Site exist. As such, it is unclear whether all of the Response Action Costs are covered under the contribution provisions of Section 113 of CERCLA or whether some of the Response Action Costs are recoverable in full by the parties liable for Stickney and Tyler against the parties liable for the Central Portion of the XXKem Site pursuant to Section 107 of CERCLA. As allowed by the Federal Rules of Civil Procedure, Plaintiffs have pled both theories in their Complaint. Actual divisibility of the costs between those attributable to Stickney and those attributable to XXKem is largely impossible until the issue of recoverability under Section 107 is decided.

In the existing table, certain costs are more easily classified as XXKem Site costs. These include the additional work done in the EE/CA to identify an LNAPL source and to identify a fill boundary; technical work done to understand the impact of highly contaminated material in the Central Portion of the XXKem Site on the completed August 1996 Removal Design; and additional sampling done on the XXKem Site and the Stickney Site to identify and track a plume migrating from the Central Portion of the XXKem Site to the Stickney Site. By separately identifying these costs, Plaintiffs are not waiving any argument that the costs solely attributed to the XXKem Site or jointly attributed to the Stickney Site are not recoverable under an alternate theory. An acreage calculation is a useful construct to begin discussions as to what share of the response costs are due to the Central Portion of the XXKem Site, but it likely is not sufficiently definitive.

Andrew Perellis
February 21, 2000
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A separate letter to John Edgcomb further sets forth various costs relating to the Central Portion of the XXKem Site.

Future Costs

Future cost estimates for work at these sites is primarily based on the 1997 Engineer's Cost Estimate prepared by Woodward-Clyde Consultants. We have requested, but not yet received, the spreadsheets with further description of the assumptions and calculations used to prepare the 1997 Cost Estimate. The worksheets will be forwarded to you within the next week when we receive them. O&M is required for thirty years, until the year 2029, and repair of cover systems becomes more and more costly over time as settlement occurs. Plaintiffs believe that the Engineer's Cost Estimate is the only reasonable basis for estimating future costs.

Conclusion

We hope this letter provides a more complete understanding of the Plaintiffs' claim for response costs. Plaintiffs will endeavor to provide more specific information or to direct Defendants to documents already produced in the event that more specific answers are still required.

Very truly yours,


Jane E. Montgomery

JEM/klk

cc: John Barkett (via facsimile)
Participants in the Mediation (via facsimile)
Charles H. R. Peters
Kevin B. Hynes

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February 9, 2000

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BY FACSIMILE & U.S. MAIL

Jane E. Montgomery, Esq.
Schiff, Hardin & Waite
7200 Sears Tower
Chicago, IL 60606-6473

Re: Stickney/Tyler, et al. v. Earl Scheib of Ohio, Inc., et al.
No. 3:98CV7538 (N.D. Ohio)

Dear Jane:

John Barkett has requested that defendants provide to plaintiffs by Friday a list of questions about plaintiffs' Group costs, so that plaintiffs may respond by February 21, 2000. As I will be out of town after today, I have not been able to confer with the other defendants participating in the mediation. As such, please consider these questions submitted on behalf of Hanson North America, and without prejudice to the other defendants to make their own inquiries.

1. How much did each "settling party" pay, and what was its percentage share under TLI for each site? When stating percentage, provide it in terms of percentage of all generator companies, and in terms of percentage of site costs. Where several entities were aggregated together, provide the information for each entity.
2. How much has each "participating party" paid, and what is its percentage share for future costs? What was each entity's percentage share under TLI for each site? When stating percentage, provide it in terms of percentage of all generator companies, and in terms of percentage of site costs. Where several entities were aggregated together, provide the information for each entity.
3. On what was the City of Toledo's share based?
4. State the total amount of "settlement dollars" received to date from "settling parties," "participating parties," and settling defendants, respectively. State the total amount expected to be received in the future from the "participating parties." State the total

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amount expected to be received from defendants who have settled in principle with plaintiffs, identify the amount of settlement to be received from each such defendant, and identify each such defendants percentage share under TLI for each site. When stating percentage, provide it in terms of percentage of all generator companies, and in terms of percentage of site costs.

5. How much has each of the Director Parties paid for response costs that plaintiffs seek to recover, and what is each Director Party's share for future costs? What was each entity's percentage share under TLI? Where several entities were aggregated together, provide the information for each entity.
6. Schiff, Hardin and Waite was paid approximately \$200,000 for work associated with the EE/CA according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive. We would appreciate backup documentation, consisting of detailed bills (with attorney time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, why it was deemed by Group members to be appropriate for this activity to be conducted by a law firm at the rates charged, and why the Group deems these costs to be recoverable from defendants.
7. Woodward-Clyde was paid approximately \$200,000 for "order negotiations" and "project management" associated with the EE/CA according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive. We would appreciate backup documentation, consisting of detailed bills (with staff time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why the Group deems these costs to be recoverable from defendants.
8. Schiff, Hardin and Waite was paid approximately \$60,000 for work associated with PRP Identification and Allocation, while Dykema Gossert was paid approximately \$40,000, according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive, a duplication of effort, or both. We would appreciate backup documentation, consisting of detailed bills (with attorney time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why it was deemed by Group members to be appropriate for this activity to be conducted by a law firm at the rates charged, why it was not a duplication of effort, and why the Group deems these costs to be recoverable from defendants.
9. TLI was paid approximately \$165,000 for work associated with PRP Identification and Allocation, while Orion was paid approximately \$70,000, according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive, a duplication of effort, or both. We would appreciate backup documentation,

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consisting of detailed bills (with staff time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why the Group deems these costs to be recoverable from defendants, and why there was no duplication of effort.

10. Schiff, Hardin and Waite was paid approximately \$400,000 for work associated with the Removal Design Phase (about one-third of the costs), while Funk Luetke was paid about \$30,000 and Eastman & Smith was paid \$7,000, according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive, a duplication of effort, or both. We would appreciate backup documentation, consisting of detailed bills (with attorney time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why it was deemed by Group members to be appropriate for this activity to be conducted by a law firm at the rates charged, why there was no duplication of effort, and why the Group deems these costs to be recoverable from defendants.
11. Woodward-Clyde was paid approximately \$30,000 for "negotiations" associated with the Removal Design Phase according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive. We would appreciate backup documentation, consisting of detailed bills (with staff time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why the Group deems these costs to be recoverable from defendants.
12. "Others" were paid approximately \$12,000 for unspecified work associated with the Removal Design Phase according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive. We would appreciate backup documentation, consisting of detailed bills (with staff time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why the Group deems these costs to be recoverable from defendants.
13. Schiff, Hardin and Waite was paid approximately \$385,000 for work associated with the Construction Phase, while Funk Luerke was paid about \$40,000, according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive, a duplication of effort, or both. We would appreciate backup documentation, consisting of detailed bills (with attorney time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why it was deemed by Group members to be appropriate for this activity to be conducted by a law firm at the rates charged, why there was no duplication of effort, and why the Group deems these costs to be recoverable from defendants.
14. Woodward-Clyde was paid approximately \$200,000 for "technical support" associated with the Construction Phase according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive. We would appreciate backup

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documentation, consisting of detailed bills (with staff time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, and why the Group deems these costs to be recoverable from defendants.

15. Three different consulting or engineering firms were paid about \$165,000 for Performance Monitoring and O&M. This amount seems excessive, a duplication of effort, or both. We would appreciate backup documentation, consisting of detailed bills (with staff time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, why the Group deems these costs to be recoverable from defendants, and why there was no duplication of effort.
16. Schiff, Hardin and Waite was paid approximately \$30,000 for work associated with Performance Monitoring and O&M according to the exhibits attached to discovery responses plaintiffs provided to Safety-Kleen. This amount seems excessive. We would appreciate backup documentation, consisting of detailed bills (with attorney time descriptions and entries). If you desire, you may additionally provide a narrative response discussing what this work consisted of, why it was deemed by Group members to be appropriate for this activity to be conducted by a law firm at the rates charged, and why the Group deems these costs to be recoverable from defendants.
17. Document and justify plaintiffs' assertion that Tyler future costs are estimated at approximately \$2,750,000, and that Stickney future costs are estimated at \$2,700,000.

Very truly yours,

SEYFARTH, SHAW, FAIRWEATHER & GERALDSON

By



Andrew H. Perellis

cc: C. Jones
D. Hoffman
J. Edgcomb

AHP/bdp

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